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A Self-Determination Theory Approach to Depressive Symptoms after Marriage: A Causal Model

Anahita Mehrpour

Erasmus Mundus Master's Programme in Social Work with Families and Children

Supervisor
Dr Hanan El Malla

Field Advisor
Dr Massoud Hosseinchari

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Abstract

Title: A Self-Determination Theory Approach to Depressive Symptoms after Marriage: A Causal Model

Author: Anahita Mehrpour

Key words: Post-Marriage; Depressive Symptoms; Women; Basic Psychological Needs; Self-Determination.

This study examined post marriage depressive symptoms as related to basic psychological needs satisfaction and frustration, as well as significant life stressors. The mediating roles of general purpose in life and marital self-efficacy were also examined. A total of 350 women fulfilling both inclusion and exclusion criteria participated in this research. To collect the data five surveys were used, as well as a demographic questionnaire. Participants responded to the Basic Psychological Needs Satisfaction and Frustration Scale (Chen et al., 2015); Stressful Life Events Questionnaire (Bergman et al., 2007), Marital Self-Efficacy Scale (Caprara et al., 2004), General Purpose in Life Questionnaire (Byron and Miller-Perrin, 2009), and Center for Epidemiologic Studies Depression Scale, Revised (Eaton et al., 2004). Results from structural equation modeling analysis indicated that general purpose in life fully mediated the relationship between basic psychological needs satisfaction, basic psychological needs frustration, and the depressive symptoms. Basic psychological needs frustration has shown the strongest direct effect on depressive symptoms. Additionally, although marital self-efficacy showed a significant relationship with basic psychological needs satisfaction and frustration, it did not mediate their relationship with depressive symptoms. Surprisingly, the significant life stressors were found not to be correlated with any of the key variables. The combination of basic psychological needs satisfaction and basic psychological needs frustration accounted for 60% of the variance in General purpose in life. Also, the combination of the variances explained 21% variance of marital self-efficacy. Overall, the model accounted for 67% of the variance in depressive symptoms after marriage. Results suggest that self-determination theory, as it claims, explains both well-being and psychopathology, as well as the interpersonal context reasonably. Also, the prevalence of depressive symptoms after marriage is a factor worth considering while studying the psychopathology of interpersonal relationships.

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This dissertation is not just the end of my graduate studies; rather it is the result of the many years of enthusiasm for being a researcher and fulfilling endeavors to cross the boundaries and gain rewarding experiences from the new horizons ahead. I would like to express my gratitude to my host universities and the Mfamily Consortium. Enrolling in the master's degree in Social Work with Families and Children, brought about substantial changes to me rather than mere learning, and opened up irreplaceable horizons. I also express my sincere thanks to the European Commission, which my attendance at this program was not possible without its great support.

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Dedication

Life is naught but being aware in the time of trial	جان نباشد جز خبر در آزمون
The more awareness one has, the more life one has	هر که را افزون خبر، جانش فزون
(Rumi, Persian Poet)	(مولانا؛ شاعر پارسی‌گوی)

I dedicate this dissertation to my family:

My loving parents, sweet sister, Dayi Ali, and my grandparents

Acronyms

APA: American Psychological Association

APA: American Psychiatric Association

BPN: Basic Psychological Needs

BPNSF: Basic Psychological Needs Satisfaction and Frustration

CESDS-R: Center for Epidemiologic Studies Depression Scale – Revised

CFA: Confirmatory Factor Analysis

DSM 5: Diagnostic and Statistical Manual of Mental Disorders, 5th Edition

EFA: Exploratory Factor Analysis

GHDx: Global Health Data Exchange

GPLQ: General Purpose in Life Questionnaire

ICD-10: International Classification of Diseases, 10th revision

MSE: Marital Self-Efficacy

NIMH: National Institute of Mental Health

SDT: Self-Determination Theory

SEM: Structural Equation Modeling

SID: Scientific Information Database

SLEQ: Stressful Life Events Questionnaire

Chapter 1
Introduction

Working at the Shiraz University Psychotherapy Clinic as an intern, I have visited many young women with the depressive symptoms within the first two years of their marriages. Investigating the literature, I could not find many reliable studies of depression in the early years of marriage. Thus, I observed a big gap between the literature and the real psychotherapy setting. The depressive symptoms I recognized, were not explained by any significant life event other than marriage and the women I have met, were psychologically healthy by the time. By surveying colleagues and clinical psychologists in three psychotherapy clinics, I came to this conclusion that the depression experience in recently married Iranian women is not infrequent and should be taken into consideration as a research question.

Meeting with several women with the same complaint, prompted my research topic which wanted to know what the possible antecedents of depressive symptoms after marriage in Iranian women are.

1.1. The Rationale for the Study

Living in a developing country, as a young woman, I have faced several challenges which could potentially affect my mental health, as well as social and psychological functioning. Among all these, the relationship processes in the dichotomous context of Iran seems provocative to me. Being adjusted to the traditional and at the same time, modern norms of Iranian society complicates social and interpersonal processes and on the top marriage as a highly respected and sought-after institution which I think worth investigating. Insofar as Iranian context still consists of some traditional features like patriarchy, it is more likely for women to face difficulties while entering a new relationship.

My background in clinical psychology and the Mfamily journey offered me the opportunity to gain a profound knowledge of family processes, the policies for supporting children and women and the risk-resilience approach toward relationships in different contexts by spending a semester in Portugal, Sweden, and Norway. Studying in social work after a long time concentrating on individual psychology, enabled me to apply a systemic perspective and find the significant disparities in the system rather than just seeking the minor problems or strengths. This holistic view enthuses me to see an underlying process of conjugal marriages in Iran.

Using the critical spectacles of social work, I started examining the popular idea that “marriage makes people happier.” Investigating the ample of research on marriage, I found out mixed evidence for the statement above. Social work education in a highly diverse setting also allowed me to be more culturally sensitive and to reflect upon the ideas through this viewpoint, as well. Consequently, I decided to collect the data in Iran with the expectations that my research enlightens the unseen aspects of marriage in a Middle Eastern context as well as providing a ground for future research on post-marriage depressive symptoms.

This chapter sets the scene for the study by providing an overview of the depression and related symptoms, the prevalence of depression in the general population and introduces the central variables that will be discussed throughout the thesis. I will conclude by outlining the contents of the chapters in the study.
My primary research question is "what the antecedents of depressive symptoms in early marriage are?". I also want to investigate the possible demographic differences between the groups of women.

I chose a quantitative approach to data collection and analysis to be able to examine my hypotheses empirically. The application of structural equation modeling will be discussed in the methodology chapter as will its limitations. However, having in mind that the research on depression in early marriage is not that old, it is vital to provide some evidence through quantitative methods in an inductive way as the literature does not show a considerable body of research on the topic.

1.2. Aim

The present study aimed to respond to a gap in the depression literature and add to the studies working on the depressive symptoms as a major health problem of the day by analyzing the causal relationship between basic psychological needs and depressive symptoms in a targeted group of women. I am also intended to examine a possible mediator of the relationship between constructs.

Specific aims of the research for this thesis:

1. Identifying psychological and relational predictors (using self-determination theory and social cognitive theory) of depressive symptoms in newlywed Iranian women.
2. Investigating the differences in each variable due to the demographic variations.
3. Identifying the goodness of fit for the suggested model for the post-marriage depressive symptoms.

1.3. Significance

1.3.1. Depression and Marriage

Despite high divorce rates, marriage continues to be a highly demanding and respected institution (Johnson, 2015). Being in a satisfying marriage has consistently been associated with better physical health, mental health and the overall life satisfaction (Robles, 2014; Robles, Slatcher, Trombello, and McGinn, 2014; Proulx, Helms, and Buehler, 2007). Thus, being happy in a marriage has been the subject of several studies and for decades and researchers have attempted to identify the underlying elements of satisfying marriages in the hopes of being able to help distressed couples and prepare the next generation to have better relationships (Johnson, 2015).

Getting married is usually assumed as a critical decision with multidimensional implications throughout the life course. As mentioned, the link between marriage and health has been researched; but reviewing the literature reveals that some potential pathological effects of marriage are yet less discussed.

Different risk factors for a marriage can be considered: biological factors (Shahhosseini, Hamzeh Gardeshi, Pourasghar, and Salehi, 2014), social stressors and the threats of separation and divorce (Beach, Sandeen, and O'Leary, 1990), cultural (Sanai Zaker and Boostanipour, 2016), and clinical or subclinical factors (e.g., Whitton, Olmos-Gallo, Stanley, Prado, Kline, St. Peters, and Markman, 2007) may influence marital satisfaction among couples. Of all risk factors for marriage, the risk of experiencing depressive symptoms as a major public health problem should be investigated.

According to WHO (2017) Report on Depression and Other Common Mental Disorder, depression is becoming increasingly prevalent in the world, and the risk of getting depressed is even higher for women. Based on the WHO's report, the global population with depression in 2015 is estimated to be 4.4%, and depression is more common among females (5.1%) than males (3.6%). Based on the Global Health Data Exchange (GHDx) in 2016, the prevalence of depression in Iran for both sexes is about 5.8% which is above the average. The prevalence of depressive disorders in Iranian females is 6.8% which is higher than males (4.80%).

The statistics are staggering and consistent with the literature on depression. As Nolen-Hoeksema (1987) mentioned, women are twice as likely as men to experience depression in their lifetime. Cross-national studies have demonstrated that this is true in both Western and non-Western countries (Weissman et al., 1993; see also Whisman, Weinstock, and Tolejko, 2006).

This increasing risk for women should be taken into consideration as they may experience less social support and autonomy and more social pressures and expectations (Simonds, 2001), especially in patriarchal and traditional societies. Women are more susceptible to depression as they experience several hormonal changes during their lives. Some researchers use the term "from menarche to menopause" to mention the most significant biological variables causing depression (i.e., Denko and Friedman, 2014), usually followed by "post-partum depression" identified as the most significant and prevalent type for women. However, there are other risk factors in the interpersonal context of depression for women (Joiner and Timmons, 2009).

1.3.2. Marriage adds to the risk for depression.

"Despite improved recognition and treatment of mood disorders, understanding the mechanics of the interpersonal context of depressive disorders remains a vital area of scientific research" mentioned Rehman, Gollan, and Mortimer (2008; p. 179). Several studies remind that relationships can play an important role in the onset or relapse of depressive disorders (i.e., Whisman and Kaiser, 2008).

Evolving interpersonal conceptualizations of depression, based primarily on cognitive and biological perspectives, have been the dominant zeitgeist in academic psychology (Joiner, Coyne, and Blalock, 1999). Given the immense social importance of marital relationships, it is not surprising that researchers have focused closely on marital quality and dynamics in an effort to better understand the interpersonal difficulties of depressed individuals (Rehman, Gollan, and Mortimer, 2008).

On another hand, the studies on significant life stressors recognize 'getting married' as a source of stress for individuals (e.g., Bergman, Sarkar, O'connor, Modi, and Glover, 2007) which is closely related to getting depressed. Whisman and Kaiser (2008) mentioned that the theoretical importance of marriage and other intimate relationships for understanding and treating depression is grounded in a long history of relational theory and clinical research. They exemplify Bowlby's explanation for depression (1969) which relates depression to the attachment bonds. Beach and his colleagues' study (1990) was also mentioned as they suggest marital discord and elevated levels of negative behaviors and relationship stress leads to subsequent depression which is in turn, leads to higher levels of relationship discord.

Despite the large body of literature on the relationship between depressive symptoms and various aspects of marriage, there is mixed evidence for the antecedents of depression, specifically in early marriage. Studies have shown the association between marital status and depression (i.e., Whisman, Weinstock, and Tolejko, 2008), and marital functioning and depression (e.g., S. R. H. Beach, Sandeen, and O'Leary, 1990). Some studies concentrated on the risk factors for depression within marriage (Whisman and Kaiser, 2008) such as relationship stressors, relationship cognitions, and the partner's behaviors. Evidence-based research scrutinized the methodological considerations of studies on depression in the marital contexts as well as interpersonal theories of depression (Rehman, Gollan, and Mortimer, 2008). Brock and Lawrence (2011) identified marriage as a risk factor for internalizing disorders, and Jr. Joiner and Timmons (2009) investigated the interpersonal consequences of depression. However, the literature is lacking the studies that assume "*union formation*" can be a stimulating factor for experiencing some depressive symptoms.

1.3.3. The context of Marriage and Family Formation in Iran

Iran is a Middle East country, which shares Islam as the religion with other countries in the region. The majority of Iranians practice Shia sect of Islam, which is different in some detail with the Sunni sect, practiced in most of the Arab countries. From pre-Islamic era, Iran inherited the Persian culture and language (Aghajanian, 2001). Iran has a population of approximately 80 million (49% female, 51% male). Formerly known as Persia, Iran emerged by a rich and robust civilization consists of various roots for norms, dominant culture, and structures.

Aghajanian (2008) mentions that the initial impact of the western culture on Iran started in the 19th century which led to a full-scale westernization of Iranian society during the 1970s. The Rapid economic growth during the postwar II (1955-1979) enabled Iran to develop the infrastructure which was accompanied by social reforms such as redistribution of lands, legal and symbolic changes to enhance the social status of women and increase their participation in the domains outside the household. Also, A new set of family laws was passed to improve the legal status of women within marriage and family. The legal and symbolic changes were geared not only toward promoting the status of women but also toward affecting patterns of family formation and levels of fertility and family growth (p. 265).

The Islamic revolution was a significant turning point in the social and economic structure of Iran. The revolution changed the fabric of the society and economy through policies for the revitalization of Islamic values in all dimensions of life. The legal changes implemented these policies and cultural shift toward Islamic values. The shift toward Islamic principles was reinforced

through mass media communication (i.e., television), and formal and informal educational programs. The revolution was followed by the eight-year war between Iran and Iraq in which impacted the situation of families and women on a large scale (Aghajanian, 2011).

Today, Iran can be characterized as a society in transition to modernity with both traditional and modernist norms and regulations, as well as a spectrum of values from patriarchy to feminism (this can be assumed as a dichotomy, as well). As mentioned by Aghajanian (2008) and Abbasi-Shavazi, and McDonald (2008) Families in Iran are now influenced with values from the pre-Islamic era, as well as modern values and more recent efforts to rich socioeconomic developments.

Historically, families in Iran have been the centers of production and reproduction (Aghajanian, Afshar Kohan, and Thompson, 2018). To depict the current trends of family change in Iran, Abbasi-Shavazi and McDonald (2008) state that at the level of the family, several dimensions of family life have remained relatively constant, whereas others have changed dramatically. The most significant individual change in recent decades is the increased level of education across cohorts, stimulated by the egalitarian nature of the revolution. The timing of marriage has also shifted toward higher ages, particularly for girls, and fertility behavior and attitudes of women have changed considerably. Change within the family has tended to be stronger at the level of the individual couple. This includes decisions about the number of children to have and attitudes about gender roles within the relationship. As attention shifts from the internal or intimate to the external or public aspects of family, change becomes more muted. This is due to the official regulations regarding the public role of women. Marriage with relatives remains common with little change across time, although attitudes have changed (pp. 177-178).

To summarize, I can mention that the marriage and union formation in Iran is subject to some gradual changes according to the transition to modernity. The increasing power of social media and facilitated interactions, and the development of women's socio-economic status, as well as more egalitarian approaches toward autonomy of the individuals, impacted the situation. On the other hand, there are still trends like the dependency of children to their parents as a value, delayed adolescence as a result of the centrality of family and its cultural and religious value in a highly collectivist culture, and some degree of patriarchy in more traditional sectors of the society. The new patterns of family formation like cohabitation (known in Iran as *white marriage*) has emerged in the Iranian society quite recently which provokes severe debates as the only accepted form of union formation is the 'religious marriage.' To explore the potential effects of this specicific context, it is vital to perform studies, and the present study can provide a ground for further investigations.

1.4. The Gap in the Literature

My literature search on the topic of depressive symptoms in newly-wed women did not reveal many results. While conducting broader searches related to the marital context of depression, I have found several studies which I refer to throughout this thesis. Among all, I refer to the WHO indices and statistics on the depression and other common mood disorders, as well as public health indices, both from the UN and Iranian National Center for Statistics.

Also, most of the studies I have found concentrated mostly on within-marriage variables and the clinical forms of depression. No study exploring the possible motivational, and personal antecedents of depressive symptoms in marital contexts. Not many studies have investigated the concept of post-marriage depressive symptoms in newly-wed women. Nonetheless, there were not many studies assuming entering a marital relationship a significant determinant of depressive symptoms, and in case of Iranian population, no models that I found analyzing antecedent of depression in recently married women.

The topic of this study is essential for filling the gap that exists in the area of depressive symptoms in married populations, specifically, women. The research is vital for attracting the attention of social workers, health care providers, clinicians, psychologists, and psychiatrists for preventing depression in a period usually postulated as the 'Honey Moon' of relationships (first years of marriage).

Furthermore, this dissertation represents the multidisciplinary nature of social work and how it can be related to both theoretical grounds of health and clinical implications, as well. Most importantly, this study aims to trigger future studies on the marital context of depression through offering foundations for the problem area. Evidence from the present dissertation can be the basis for more in-depth questions about the nature of depressive symptoms after getting married, the motivational determinants (Basic Psychological Needs) of the depressive symptoms and the possible personal (i.e., personal purpose in life) and relationship (i.e., marital self-efficacy) mediators of such relationship.

1.5. Dissertation Structure

This study is divided into seven chapters. The first chapter has presented an introductory framework for the study. The second chapter introduces the theoretical background of the research including self-determination theory (Deci and Ryan, 2000), social cognition theory (Bandura, 1996), and the depression symptomology based on the Diagnostic and Statistical Manual of Mental Disorders – 5 (APA, 2013). In the end, the suggested model for investigating the relationship between variables will be presented. The third chapter consists of a review of the literature on the variables: basic psychological needs, significant life stressors, marital self-efficacy, general life purpose, depressive symptoms and their relationships. The fourth chapter, methodology, includes participants and methods, study population, the construct and psychometric properties of the questionnaires. The method of data collection, entry and statistical analyses will be described as well. The fifth chapter presents both descriptive and inferential statistical findings together with the model fit indices and the relationships between variables. Next, the discussion chapter critically analyses the implications of outcomes as well as the consistency of the findings with the existing body of literature. Conclusively, the seventh chapter offers a summary of findings, describing the significance and the implications of the outcomes. The chapter will end with a set of recommendations for future directions in the field.

Chapter 2
Theoretical Background

Introduction

For quantitative research, theories are one component of reviewing the literature and are often test as an explanation for answers to the research questions (Creswell, 2014). In this chapter, the underlying theories of each variable will be discussed. An introduction to the background of the problem will be presented, as well as the conceptual frameworks in which variables are related to. The chapter leads to the profound review of the literature and the relationship between variables.

2.1. Background of the Problem

Being happy in a marriage has been the subject of several studies. Among all implications of marriage, the link between marriage and health has been researched. Marriage can lead to better psychological and physical health (Robles, 2014). Evidence-based research also shows that greater marital quality leads to better health, lower risk of mortality and cardiovascular disease and a higher perceived personal well-being (Robles, Slatcher, Trombello, and McGinn, 2014; Proulx, Helms, and Buehler, 2007).

Reviewing the literature reveals that some potential pathological effects of marriage are yet less discussed. Of all possible threats, depression in marriage has been the concentration of several studies. However, there is lack of information in the marriage and depression research during the first three years of marriage and the possible effects of entering a marital relationship on depressive symptoms.

Depression is a significant public health problem, affecting 15 to 20 percent of the population at some point in their lifetime (Whitton et al., 2007; World Health Organization, 2017). Given that depression and even subclinical forms of depressive symptoms are correlated with later psychopathology and poor psychosocial functioning (i.e., Matsunaga et al., 2010), gaining understanding about antecedents of depressive symptoms is crucial. Although the risk of depression is multidetermined, there is substantial evidence that marital distress is one significant risk factor (Whitton et al., 2007). It is reported that numerous studies have documented a robust association between marital distress and depression, at both diagnostic and subclinical levels of depressive symptoms (reviewed by Whisman, 2001; Whitton et al., 2007). Whisman and Bruce (1999) reported that marital distress prospectively predicts depression onset, tripling the probability of a major depressive episode in the coming year.

The importance of studying depressive symptoms in the first years of marriage can be revealed by looking at the astonishing statistics of divorce in Iran, as a Middle Eastern context. Due to the Islamic Republic of Iran's National Center for Statistics the rate of divorce has been increased in the recent years. Aghajanian and Thompson (2013) stated that it is vital to look at the divorce trends in Iran, as "strong cultural-religious traditions and legal prescriptions and proscriptions have largely mandated early, lifelong marriages, precluding divorce save in exceptional circumstances" (p. 112). National Statistics Organization (2018) Showed that from

1996 to 2016 the number of divorces has been increased so that in 1996 there were 37817 registered divorces, whereas, in 2016, 163756 divorces were registered (at the same time, the rate for marriage has been increased more slightly. In 1996 the number of marriages registered was 479263, and in 2016 it was 685352). Understanding the potential causes of divorce can help us develop prevention strategies and help people after facing divorce. Using National Statistics Database of Iran (2017-2018) to the date (the 10th month of the Iranian year), there were 163765 divorces recorded and 40 percent of those divorces were in the first to the third year of marriage (66973 of 163765) which shows the vulnerability of marriages in early years, specifically in Iran. The head of Iranian Association of Social Workers (April 25th, 2018) reported the registration of 19 divorces per working hour in Iran which can be interpreted as a relationships disaster. The literature showed that individual psychopathologies could be significant risk factors for marriages including depression and the causes for its onset just after marriage. As a result, the present study aimed to unveil antecedents of depression in its marital context, specifically through the lens of motivational theories: Self-Determination Theory, Social Cognitive Theory, and General Goal Orientation in Life. In this chapter, each related theory will be discussed.

2.2. Depression and the Depressive Symptoms

2.2.1. Definition

Mood disorders are the second most common group of mental disorders (Saito, Iwata, et al., 2010). Of all mood disorders, the depressive disorder in its clinical or subclinical forms affects how people feel, think, and behave, as well as their psychomotor activity and functioning. As Friedman (2014, p. 1) states "The depressive disorders comprise a heterogeneous group of illnesses that are characterized by differing degrees of affective lability and associated cognitive, neurovegetative and psychomotor alterations. Depression is currently the fourth most disabling medical condition in the world, and it is predicted to be second only to ischemic heart disease with regard to disability by 2020."

There is a broad spectrum of depressive disorders characterized by the presence of sad, empty, or irritable mood and varying degrees of other somatic and cognitive changes [3]. According to the *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition (DSM-5; APA, 2013). In the past decades, we have gained an increasing understanding of the Symptoms and course of depression. Previously viewed as an acute and self-limiting illness, it is now clear that, for many individuals, depression is a lifelong illness which is worth considering (Boland and Keller, 2009).

One important aspect of DSM 5, compared with the previous versions, is the paradigm shift from the categorical classification of disorders to a more dimensional approach that aimed encouraging researchers to think beyond current ways of explaining and diseases (Adam, 2013; Park and Kim, 2018). The dimensional viewpoint allows us to look at the depressive symptoms like a spectrum of sings instead considering only clinical forms of depression (i.e., Major Depressive Disorder, or Bipolar Disorder). Table 1 Explains the Depressive Symptoms based on DSM 5.

Table 1

The signs and symptomology of Depression (DSM 5)

five or more of the symptoms listed below must be present during the same 2-week time period that represents changes in functioning. At least one symptom is either a depressed mood or loss of interest.
• Depressed mood most of the day, nearly every day, as indicated in the subjective report or in observation made by others • Markedly diminished interest in pleasure in all, or almost all, activities most of the day and nearly every day • Significant weight loss when not dieting or weight gain, for example, more than 5 percent of body weight in a month or changes in appetite nearly every day • Insomnia or hypersomnia nearly every day • Psychomotor agitation or retardation nearly every day • Fatigue or loss of energy nearly every day • Feelings of worthlessness or excessive or inappropriate guilt • Diminished ability to think or concentrate, or indecisiveness nearly every day • Recurrent thoughts of death

The latest version of International Classification of Diseases (ICD 10) suggests another symptomology of depression which is reflected in table 2. The ICD-10 classification of Mental and Behavioral Disorders (WHO, 1993) developed in part by the American Psychiatric Association classifies depression by code. In typical, mild, moderate, or severe depressive episodes, the patient suffers from lowering of mood, reduction of energy and decrease in activities. Their capacity for enjoyment, interest, and concentration is reduced and is marked by tiredness after even a minimum of effort is common. Sleep patterns are usually disturbed and appetite diminished along with reduced self-confidence and self-esteem.

Table 2

The signs and symptomology of Depression (ICD 10)

Final code selection is based on severity (mild, moderate, severe) and status. Depending on the number and severity of the symptoms, a depressive episode may be specified as mild, moderate, or severe.
For mild depressive episodes, two or three symptoms from the data below are usually present. **A.** The general criteria for depressive episode must be met. **B.** At least two of the following three symptoms must be present: *a.* Depressed mood to a degree that is definitely abnormal to the individual, present for most of the day and almost every day, largely uninfluenced by circumstances, and sustained for at least two weeks *b.* Loss of interest or pleasure in activities that are normally pleasurable c. Decreased energy or increased fatigability **C.** An additional symptom or symptoms from the following list should be present to give a total of at least four: *a.* Loss of confidence or self-esteem *b.* Unreasonable feelings of self-reproach or excessive and inappropriate guilty *c.* Recurrent thoughts of death or any suicidal behavior

d. Complaints or evidence of diminished ability to think or concentrate, such as indecisiveness or vacillation

e. Change in psychomotor activity, with agitation or retardation (either subjective or objective)

f. Sleep disturbance of any type

g. Change in appetite (decrease or increase) with corresponding weight change

For moderate depressive episodes, four or more of the symptoms noted above are usually present, and the patient is likely to have great difficulty in continuing with ordinary activities.

2.2.2. The Risk Factors for Depression

Various risk factors are assumed to be meaningful in explaining why people get depressed. According to the National Institute of Mental Health (NIMH, 2018), depression is a common disease that can happen at any age, often begins in adulthood. The most significant risk factors for depression mentioned by NIMH are: personal or family history of depression, major life changes, trauma, or stress, and certain physical illnesses and medications.

Dobson and Dozois (2008) have classified the risk factors for depression through a risk-resilience perspective. They have highlighted the biological, endocrine, and genetic risk factors, cognitive models of depression, and social and interpersonal vulnerabilities to depression. According to their perspective, the genetic risk and familial transmission of depression are crucial risk factors for depression. Some neural structures can be considered as risk factors. According to the Limbic-Cortical Dysregulation Model (Ramasubbu and MacQueen, 2008), prefrontal cortex, and dorsomedial prefrontal cortex play a role in regulating stress response system. The dysregulation in this structure and some other structures such as dorsolateral prefrontal cortex, orbitofrontal cortex, anterior cingulate, and HPA axis hippocampus interaction can lead to depressive disorders. Anisman, Matheson, Hayley (2008) mentioned organismic variables such as monoamine variations and corticotropin-releasing hormone as a significant determining factor for depression. Also, using the sleep-focused model of depression, it was stated that the disturbances of normal sleep cycle characterize the depressive disorders.

The cognitive risk factors for depression laid on the Beck's Cognitive theory of Depression (1967; 1983). Based on this framework, dysfunctional cognitive schemas, beliefs, and assumptions determine the risk for depression (Dozois, and Beck, 2008). Applying an information processing viewpoint, attention and memory are the basic building blocks of cognition which lay the foundation for all cognitive antecedents of depression, for instance, recall bias, memory specificity, attentional affective bias, inhibition of attention and thought suppression (Ingram, Steidtmann, and Bistricky, 2008). Other cognitive perspectives may include optimism and pessimism, as the beliefs we hold about the future (Schueller and Seligman, 2008; Abela, Auerbach, and Seligman, 2008), ruminative response style (Wisco and Nolen-Hoeksema, 2008), negative cognitive style (as the themes of inadequacy, loss, failure, and worthlessness; Beck, 1987), and social problem-solving (interpersonal problem solving; Nezu et al., 2007).

Social psychologists seek the roots of depression in early interpersonal relationships such as early attachment experiences between the infant and caregiver (Moran, Bailey, and Deoliviera, 2008). Harkness (2008) referred to some life events and hassles as major determinants of depression which includes the childhood adversity and severe life events. Among interpersonal factors of depression parental psychopathology and parenting style was mentioned in several studies (i.e., Essau and Sasagawa, 2008; Tacchi and Scott, 2017). Low social support is recognized as a determinant of major depressive disorder (Lakey and Cronin, 2008; Tacchi and Scott, 2017). Other social factors of depressive symptoms might consist of stress generation (Hammen and Shih, 2008), Reassurance and negative feedback seeking (Timmons, and Joiner, 2008), and Avoidance (Ottenbreit and Dobson, 2008).

One important antecedent of depression is Marriage (and other relationship issues). According to Whisman and Kaiser (2008), the most crucial aspects of relationships involving in depression are marital discord, relationship stressors, and negative relationship dynamics. In the review of the literature, this aspect will be discussed more precisely through focusing on the literature about union formation and depression.

2.3. Self-Determination Theory

Self-determination theory (Deci and Ryan, 1985, 2000, 2008, 2017) is a motivational framework for discussing many processes related with romantic relationships including marriage (La Guardia and Patrick, 2008; Knee, Hadden, Porter, and Rodriguez, 2013; Knee, Lonsbary, Canevello, and Patrick, 2005). This theory is known as "a theory of motivation that incorporates personality, developmental, and situational influences on optimal individual psychological well-being" (Knee et al., 2013). A fundamental concept of Self-determination Theory (SDT) is the distinction made between the parts of *self* that are regulated by extrinsic incentives, inner pressures, expectations, and demands, versus those that are regulated by intrinsic interests, awareness of needs, and genuine core-self involvement. SDT focuses on what is functionally motivating the behavior (Knee et al., 2013).

According to self-determination theory (Deci & Ryan, 1985, 2000, 2008), being self-determined means that one's actions are relatively autonomous, freely chosen, and fully endorsed by the person rather than coerced or pressured by external forces or internal expectations. This definition emphasizes the authenticity of the choices and behaviors that are congruent with one's needs, a mindful, reflective awareness of those needs, and the capacity of one's social environment to support them (Deci and Ryan, 2017; Knee et al., 2013; La Guardia and Patrick, 2008). As mentioned, '*need*' is a core concept of SDT and investigating psychological needs fulfillment or frustration determines underlying processes in different life domains (i.e., Soenens and Vansteenkiste, 2005).

2.3.1. Basic Psychological Needs

One core concept of SDT is 'need.' In self-determination theory, needs have been defined as "*innate psychological nutriments that are essential for ongoing psychological growth, integrity, and well-being*" (Deci & Ryan, 2000, p. 229). According to SDT, optimal psychological health and

well-being emerge from the satisfaction of basic psychological needs for *autonomy*, *competence*, and *relatedness*.

Need for autonomy reflects the need to feel that one's behavior is personally endorsed and initiated, acting from integrated values (Angyal, 1965; Deci, 1980; Deci & Ryan, 2000).

Need for competence reflects the need to feel competent and effective at what one does. Broad literature has supported the importance of ongoing feelings of competence for optimal functioning and well-being. For example, Bandura's (1977) work on self-efficacy has shown that believing that one can bring about desired outcomes is an important determinant of psychological health. Furthermore, Carver and Scheier (1990) have shown that believing that one is effectively making progress toward one's goals is psychologically beneficial.

Need for relatedness reflects the need to experience a sense of belonging, attachment, and intimacy with others (Deci & Ryan, 2000). Baumeister and Leary (1995) referred to this, as the need to belong, and they reviewed extensive evidence on belongingness as a vital human motivation. Need for relatedness also derives from perspectives on intimacy and closeness (Reis & Patrick, 1996). Need for relatedness also captures what the literature on attachment and felt security has suggested is important for optimal relational development (Bowlby, 1969).

Support of these basic psychological needs facilitates the development of self-determined motivation. Importantly, individuals' social environments—their caregivers, romantic partners, teachers, friends, families, and larger social ties— can provide ongoing support for these needs to varying degrees. Empirical support for this process comes from studies indicating that, for example, people are more securely attached to, and more likely to emotionally rely on, those who meet their needs for autonomy, competence, and relatedness (La Guardia, Ryan, Couchman, & Deci, 2000; Ryan, La Guardia, Solky-Butzel, Chirkov, & Kim, 2005), and that fulfillment of these psychological needs predicts general well-being (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000; Sheldon et al., 1996), and relational well-being (Patrick, Knee, Canevello, & Lonsbary, 2007).

Also, individuals' perceptions that their friends support their autonomy strivings predict greater overall need satisfaction and positive relationship quality (Deci, La Guardia, Moller, Scheiner, & Ryan, 2006). Furthermore, both partners' levels of need fulfillment uniquely predict one's own relationship functioning and well-being. Finally, those who experience greater need fulfillment within their romantic relationship show better relationship quality after disagreements due to their tendency to have more self-determined reasons for being in the relationship (Patrick et al., 2007).

For romantic relationships, these basic psychological needs perspective suggests that quality close relationships involve more than merely feeling satisfied with them. Relational well-being is thought to emerge when the relationship context supports the basic needs of both partners, promoting autonomous motivation for being in the relationship, which in turn facilitates how the couple approaches and manages disagreements and conflicts (Patrick et al., 2007; see also Knee, Lonsbary, Canevello, and Patrick, 2005).

2.4. Significant Life Stressors

Adverse life events are well-documented risk factors of psychopathology and psychological dysfunction through lifespan (Tiet, Bird, et al., 1998). The notion of *Stress* was first used in the 17th century as synonymous with 'hardship, straits, adversity or affliction' while in the 18th and 19th centuries the term came to be associated with 'force, pressure, strain or strong effort' (Pollock 1988; Paradies, 2011). Since then, psychosocial stress has become one of the most ubiquitous concepts in public health (Paradies, 2011). Since the 1960s, a plethora of disciplines including psychology, psychiatry, nursing, medicine, sociology and social work, anthropology, and pharmacology have examined psychosocial stress (Mulhall, 1996).

To conceptualize stress, researchers have adopted two broad approaches: "Stress as Stimulus," and "Stress as Response." The stimulus-based or *objective stress* views stress as synonymous with a stressor (i.e., disturbing stimuli produced by an external/internal environment). Contrarily, the response-based or *subjective stress* model defines stress as an individual's response to stressors (Mulhall, 1996), which are defined more broadly as external/internal stimuli that are potential causes of stress (Aneshensel, 1992). Subjective stress involves a process of appraisal whereby an external/internal stimulus is perceived as a stressor, if it is considered to be either undesirable and/or if it results in a loss of power/resources (Paradies, 2011, p. 4).

Through a system science approach, Oken, Chamine, and Wakeland (2015) defined a stressor as "an environmental event that significantly perturbs the entire human dynamical system away from the optimal attractor resulting in a state of lower utility" (p. 46). According to Paradies (2011), most researchers classify stressors into three categories including *life events*, *chronic stressors*, and *daily hassles/uplifts*.

Life events are discrete, acute, observable events which require major readjustment within a relatively short period (e.g., birth of a child, divorce) and are essentially self-limiting in nature (Wheaton, 1999). The construct is among the earliest approaches in stress research, generally taking the form of a checklist of events sampled from various domains across different hierarchies and weighted either by standardized importance of each event or subjectively by respondents (Paradies, 2011, p. 5). Traumatic events are a type of life event characterized by their *suddenness* and *extreme magnitude of impact*. Their effects on health tend to be persistent, and responses to traumas may create tendencies such as rumination (repetitive passive thoughts about negative emotions and their consequences) (Paradies, 2011; Folkman and Moskowitz, 2004; Nolen-Hoesksema et al., 1994). The present study applies a framework in which significant life stressors in terms of impact and occurrence are considered to be effective on depressive symptoms.

According to Paradies (2011), Chronic stressors, more broadly, have been categorized into a number of different types: role overload (e.g., caring for seriously impaired relatives), interpersonal conflicts within role sets (e.g., conflict between spouses), inter-role conflict (e.g., demands of work vs. family), and *ambient stressors* that cut across multiple roles and spheres of social activity (e.g., poverty, crime, and violence) (Pearlin, 1989; Pearlin et al., 2005), frustration of role expectations (Wheaton, 1983) also known as constrained opportunity structures (McLeod and Nonnemaker, 1999) have been mentioned as having a chronic impact on the individuals' lives.

Daily hassles are the irritating, frustrating, distressing demands that to some degree characterize everyday life, while uplifts are the daily events that are satisfying, pleasing and/or relaxing (Kanner et al., 1981). Daily hassles occupy an intermediate position between chronic stressors and life events, being in a sense *recurrent micro events* (Wheaton, 1999) which may even mediate the relationship between these other two types of stressors (Weinberger et al., 1987; Hewitt and Flett, 1993).

In the current study, it was important to investigate significant stressors in which women may experience in their interpersonal lives. Applying the perspective of Stressful Life Events (Barnette, Hanna, and Parker, 1983), a framework of Stressful Events for Women (Bergman, Sarkar, O'Connor, Modi, and Glover, 2007) was adopted to the conceptual model of this study which seeks to investigate a combination of significant and chronic stressors for women as they mentioned the importance of assessing group-specific stressors.

2.5. Social Cognitive Theory

Social Cognitive Theory first emerged as a social learning theory in the 1960s. Albert Bandura develops this theory as an agentic perspective to human development, adaption, and change (Bandura, 2002). Based on social cognitive theory, Individuals are active agents whose capacities for self-regulation allow them a vast degree of control over their experiences and life course (Bandura, 2001). Bandura's theory explains several aspects of human development and personality including Reciprocal Determinism, Behavioral Capacity, Observational Learning, Reinforcements, Expectations, and Self-Efficacy. Of all aspects of social cognitive theory, Self-Efficacy become a dominant area of social and clinical research.

Among the mechanisms of human agency, none is more pervasively influential than self-efficacy beliefs. Namely, beliefs individuals hold about their capacity to exert control over the events that affect their lives (Bandura, 1997, 2001).

2.5.1. Self-Efficacy

"People do not undertake activities that they feel are beyond their capabilities, nor are they inclined to pursue ambitious goals, or to persevere in the face of difficulties, unless they believe they can produce the desired results by their own actions (Bandura, 1997). The more assured they are in their capabilities to manage environmental demands, the more likely they are to take advantage of opportunities, to develop their talents, and to realize desired accomplishments. A vast body of literature verifies the pervasive influence of self-efficacy beliefs across diverse domains of human functioning, including academic, health, organizational, athletic, and sociopolitical spheres" (Caprara, Regalia, Scabini, Barbaranelli, and Bandura, 2004, p. 247).

In social cognitive theory (Bandura, 2001), efficacy beliefs are the foundations of human agency. Self-efficacy beliefs attest to the propensity of persons to reflect on themselves and to regulate their conduct in accordance with their personal goals and standards. Thus, efficacy beliefs reflect what people have learned from past experiences and provide an indication of the course of action they are inclined to take to achieve desired goals. Self-efficacy beliefs are domain-linked knowledge structures that vary across spheres of functioning rather than a global trait.

According to Bandura's theory self-efficacy can be defined as 'an efficacy expectation' (Corcoran, 1995). The first definition of self-efficacy assumes the construct as "the conviction that one can successfully execute the behavior required to produce the outcomes… whether they can perform the necessary activities" (Bandura, 1977, p. 193). Later it was evolved to "a generative capability in which cognitive, social, and behavioral subskills must be organized into an integrated course of action to serve innumerable purposes" (Bandura, 1986, p. 391). The definitions are attributed to personal areas of human agency rather an interpersonal understanding.

To involve interpersonal areas, social cognitive theory extends the conception of human agency to collective efficacy which is people's shared beliefs in their collective power to produce desired results (Bandura, 1997, 2000, 2001). On this basis, the interpersonal areas of human behavior are considered in self-efficacy construct. Caprara and colleagues (2004) have mentioned filial, parental, marital, and collective self-efficacy beliefs. The present research investigates the concept of 'marital self-efficacy' as an expectation variable.

2.5.2. Marital Self-Efficacy

"The family is a social system that exerts an ongoing influence on human development. Throughout the course of life, people face a variety of demands and challenges as part of a family system consisting of multiple interlocking relationships. The roles of spouse, parent, and child carry different opportunities, constraints, and reciprocal obligations. Each role represents an aspect of life where self-efficacy beliefs for managing the role requirements effectively may prove critical for individuals' and family functioning" (Caprara et al., 2004, p.248).

As a domain-specific construct, Marital Self-efficacy was explained as "belief that the spouses hold regarding their capabilities to communicate openly and confide in each other, share feelings, aspirations, and worries, provide each other with emotional support, cope jointly with marital problems, work through disagreements over child rearing, and share common activities and social relations". It is also concerned with spouses' efficacy to nurture feelings of mutual trust and loyalty, provide effective mutual support, avoid having disagreements turn into hostility, improve adequate communication, promote and use dyadic coping strategies to face daily stresses and to operate in concert toward the achievement of common goals, including child management and surveillance (Caprara et al., 2004).

Like all theories in the social sciences, the social cognitive theory has been criticized on the basis of its reliance on the changes in environment, the isolated interplay between person, behavior, and environment, the heavy focus on learning while paying minimal attention to emotion and motivation, as well as being a broad-reaching construct that is hard to operationalize (e.g. Bandura, 2005). Among all, focusing on specific aspects of human expectations limits the potential scope for research. To make up for the narrow concentration of self-efficacy in the hypothesized model of this dissertation, a holistic viewpoint on human goal orientation was considered as a mediator. The next part of this chapter explains the theoretical framework of 'General Goals in Life.'

2.6. General Purposes in Life

Having meaning and purpose in life is a defining characteristic of being human (Moomal, 1999). However, today, people seem to be searching for a sense of purpose in life, more than any other time (Seligman, 2004). Over the recent years, psychologists have learned how goals, as key integrative and analytic units in the study of human motivation (see Austin & Vancouver, 1996; Karoly, 1999, for reviews), contribute to long-term levels of well-being (Emmons, 2005, p. 371).

Several studies have investigated the sense of meaning and purpose as being correlated with mental health (i.e., Zika and Chamberlain, 1992) on one hand and psychopathology (e.g., Marco, Cañabate, Pérez, and Liorca, 2017) on another hand. According to Byron and Miller-Perrin (2009), goals are the manifestation of life purpose. They establish their approach to general purpose in life-based on Emmon's notion (2005) of life goals.

Emmons (2005) theorized the goals of life-based on "personal strivings" which are defined as typical goals that a person characteristically is trying to accomplish. This view emphasized the centrality of goals in human functioning as mentioned by Klinger (1998): "goals are the linchpin of human organization." In another word, goals are concretized expression of future orientation and life purpose and provide a convenient and powerful metric for examining these vital elements of a positive life (Emmons, 2005, p. 733).

The word 'striving' reflects an action-oriented perspective on human motivation which provides a behavioral movement toward identifiable endpoints as can be seen in the definition of goals as "an imagined or envisaged state condition toward which a person aspires and which drives voluntary activity" (Karoly, 1993, p. 274). Strivings, as the cornerstone of Emmons's viewpoint (2005) on general goals in life postulate information not only on what a person is trying to do but also on who a person is trying to be; the relatively high goals that are central aspects of a person's identity. Goals as highly personal constructs evince the subjective experience, values, and commitments uniquely identified by a person (Emmons, 2005).

Goals are assumed to produce well-being by serving as important source of meanings, mentioned Emmons (2005). Consistent with this perspective, goals, and values are the motivational components of meaning (Recker and Wong, 1988). Conforming to this view, Byron and Miller-Perrin (2009) operationalized life purpose as attempts to pursue one's life goals. Also, their theory encompasses a component of self-knowledge, as they believe that the understanding of one's life's goals depends on some degree of self-understanding.

Summary

In summary, this chapter identifies the background of theories used to conceptualize each variable. First, the background of the problem was outlined, and the scope of the present study was introduced. The study was designed to expand our knowledge of post-marriage depressive symptoms using a motivational framework. The theoretical foundation of each variable, as well as the specificities of the concepts, are discussed. This section leads to a more detailed literature review which is followed by the description of the relationship between variables.

Chapter 3

Review of Literature

Introduction

This chapter demonstrates the conceptualization of 'post-marriage depressive symptoms' using the theoretical background investigated in chapter two. It will begin with a brief introduction to the depressive symptoms, the etiology, and prevalence of depression in women, followed by the interpersonal context of depression, as well as its correlates. Also, the literature on basic psychological needs satisfaction and frustration will be summarized in the context where self-determination theory is assumed as a fundamental theory of romantic relationships. Among the correlates of depressive symptoms and basic psychological needs, marital self-efficacy and sense of purpose in life will be reviewed. Also, related studies about the Iranian population will be investigated. The chapter ends with briefly describing the relationships between variables, as well as the rationale for the study.

3.1. Depressive Symptoms

Over the years, depression and its related symptoms have received voluminous research attention (Eaton, Smith, et al., 2004). As mentioned by Borba and Druss (2010, p. 49) "The term *depression* is an umbrella term that encompasses many different forms of affective or mood disorders which all share certain characteristics. However, *unipolar depression* or *major depression* is manifested only by symptoms of depression, whereas *bipolar depression* represents depression in the context of a history of hypomania or mania."

As stated in the previous chapter, Major depressive disorder is a mood disorder characterized by one or more episodes of a depressed mood, lack of interest in activities normally enjoyed, changes in appetite or weight, sleep disturbances, fatigue, feelings of worthlessness and guilt, difficulty concentrating, and thoughts of death or suicide (Denko and Friedman, 2014; Borba and Druss, 2010; Simonds, 2001). Through the lens of epidemiology (Borba and Druss, 2010), "Depression is a leading cause of disability, accounting for 8% of the total disability-adjusted life years in the United States and being the fourth leading contributor to the global burden of disease in the year 2000. By the year 2020, depression is projected to become the second leading contributor to the global burden of disease for all ages and both sexes (Üstün et al., 2004)."

WHO's report on Depression and other common mental disorders (2017) represents an increasing universal rate of depression, while the rates are generally higher in the women. "Women have close to twice the lifetime prevalence of depressive disorders of men" stated by Denko and Friedman (2014, p. 15). Even with the subsyndromal symptoms of depression, that is symptoms not numerous or severe enough to meet the criteria for a diagnosis of depression, they are at risk for developing a major depressive disorder episode (Simonds, 2001). All the statistics regarding depressive symptoms suggest that understanding the risk factors for depression, as well as the prevalence, are indeed the cornerstones for prevention and future directions to help the individuals.

The following session encompasses some epidemiological studies on depressive symptoms, as well as a brief review on the risk factors for depression in women.

3.2. Etiology and Prevalence of depressive symptoms: an epidemiological approach

3.2.1. Sociodemographic Characteristics

Simonds (2001) states that the community studies of depression have consistently found that the women are more likely to get depressed than men, with a ration of 2 : 1 being the most common finding. Also, studies suggest that the gender differences in rates of unipolar depression are real rather than artifactual (i.e., Wolk and Weissman, 1995).

Borba and Druss (2010, p. 55) emphasize that "the rate of depression is higher in women than in men." As mentioned by Angold and Colleagues (1998) "prior to puberty there are no sex differences in rates of depression. Following puberty, there is a dramatic shift in the prevalence rates, with twofold greater rates among women compared with men. Almost all of this increased susceptibility to depression occurs during the childbearing years, from menarche to menopause (Denko and Friedman, 2014). Depression in Iran has been investigated in several studies. A study by Montazeri, Mousavi, Omidvari, Tavoosi, Hashemi, and Rostami (2013) considers depression as the third major health problem in Iran which is more prevalent in women.

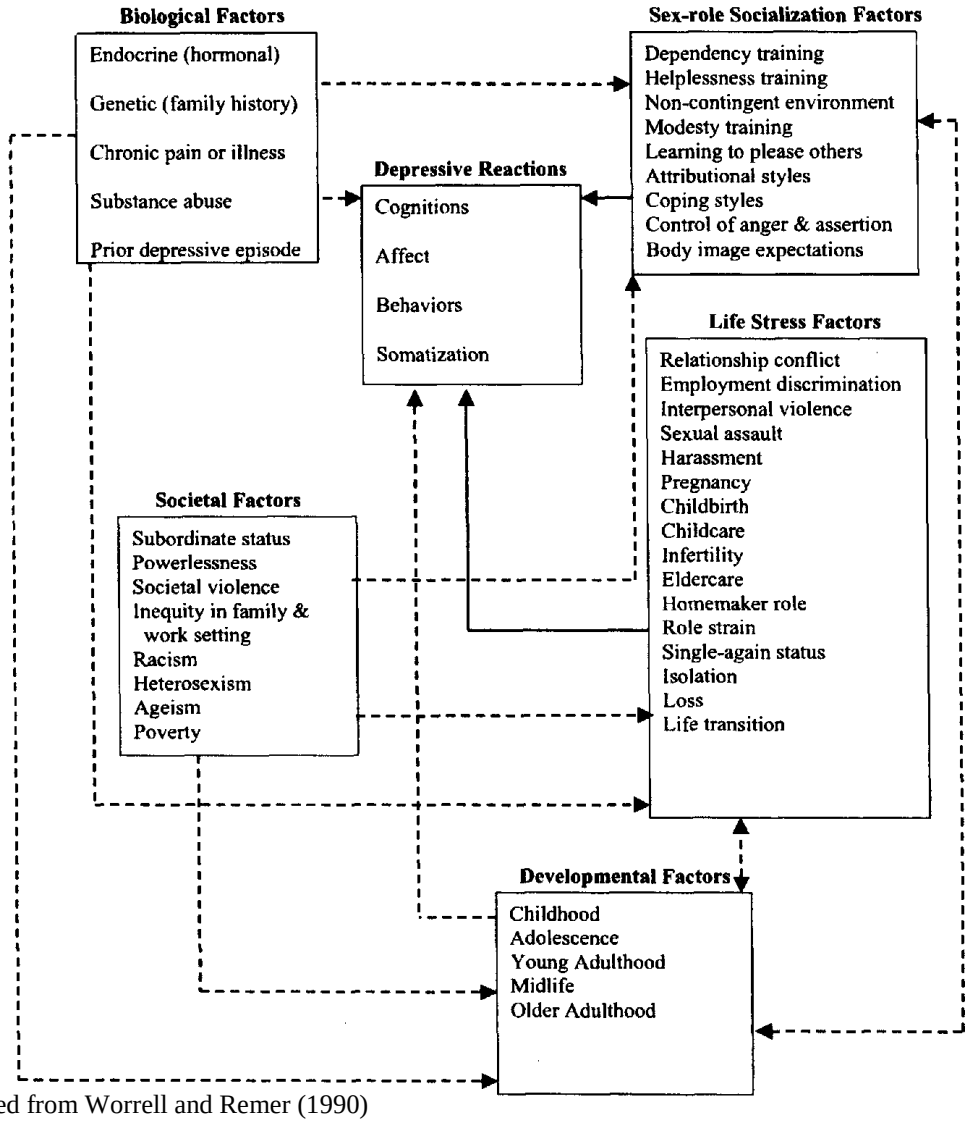
Marital status has been found to be related to the onset and prevalence of depression. In several studies (i.e., Regier et al., 1990; Blazer et al., 1994; Kessler et al., 2003) married or never married people were found to have lower rates of depression than those who were divorced, separated, or widowed. According to Whisman, Weinstock, and Tolejko (2006), the prevailing perspective concerning the association between marital status and depression is that marriage *may* protect individuals against depression, and that the effect may be greater for women than men. Additionally, the findings related to the marital context of depression provide mixed results. As an example, several studies have shown that the married individuals demonstrate higher rates of depression in Iran. Based on several epidemiological studies depression is more prevalent in Iranian divorced and married population comparing with the single individuals (e.g., Noorbala, Damari, and Riazi Isfahani, 2014; Mozhde and Zeighami Mohammadi, 2013; Sharifi, Amin-Esmaeili, et al., 2011; Noorbala, Bagheri-Yazdi, et al., 2017a; Noorbala, Bagheri-Yazdi, et al., 2017b; Mohammadi, Davidian, et al., 2005; Noorbala, Bagheri-Yazdi, Yasamy, and Mohammad, 2004). Whisman and colleagues (2006) summarize that 'the dissolution of a marital relationship seems to put people at a higher risk for depression than those who remain single or married. Empirical findings regarding differences in depression between married people and those who have never been married are less conclusive in part due to the fact that single people have not been widely examined separately from divorced and separated participants. The limited evidence available is mixed, and more research is needed before firm conclusions can be drawn (p. 222).'

According to Borba and Druss (2010) "the prevalence of depression does not vary significantly with race or ethnicity, beyond the effects of socioeconomic and educational factors. Contrary to fixed risk factors such as age and sex, personality, which is not fixed, may interact with depression."

Regarding the course of depression, as reported by Simonds (2001) the findings are mixed as to whether women have a more chronic course of depression; but women are more likely to have an early onset of depressive symptoms than men.

Explaining the possible etiology of depression in women, American Psychological Association confirms the concluding of McGrath et al. (1990): "No one theory or single theory explains gender differences in depression" (p. 5). The possible risk factors for depression were investigated in the second chapter of current study. To outline, the framework suggested by Worrel and Remer (1992) seems to be beneficial. Figure 1 depicts the factors of depression in women.

Figure 1.
Risk factors for Women's Depression



Note. Adapted from Worrell and Remer (1990)

According to the model by Worrell and Remer (1990), several risk factors account for the occurrence of depressive symptoms in women. Among all, I want to stress the social, sex roles and life stressors factors in the present study. Beyond female reproductive hormones, biological factors (Simonds, 2001), and the developmental factors (Keyes and Goodman, 2006), the interpersonal context of depression leads us to study a rather unseen side of depression. Also, in this study, the life stress factors are added to the analysis to compare the potential effects of stressors and motivational factors. As a summary, Simonds (2001) suggests the most remarkable facts regarding depression which is reflected in table 3.

Table 3
Women and Depression: the facts

- Women are twice as likely than men to have MDD.
- Women are twice as likely than men to have dysthymia.
- Women's lifetime prevalence rate for MDD is 21.3%.
- Gender differences begin in adolescence.
- Women are at higher risk for recurrences.
- Women have more body image dissatisfaction and somatic symptoms.
- Multiple roles act as a buffer against women's depression.
- Reproductive-related depressions do not explain women's high rate of depression.
- The exact role of reproductive hormones is not known.
- Women's depressions are most likely due to complex interrelationships of biological,
- life stress, sex role socialization, social, and developmental factors.

Note. Adopted from Simonds (2001, p. 48).

3.2.2. Life Stress Factors and Depression

Stressors have long been assumed as a key to understanding depression for both genders, as well as explaining the sex differences in depression (Simonds, 2001). Between 1960 and 1990, several studies found evidence of a relationship between stressful life events and the onset of depression. For instance, a study reported that events involving loss, such as divorce or death, are associated with depression (Jenaway and Paykel, 1997).

One explanation for the recurrent nature of depression is the kindling hypothesis. According to the kindling hypothesis, the strength of the association between stressful life events and depressive onsets declines with increasing number of episodes (Kendler, Thornton, & Gardner, 2000). Stress-diathesis theories of depression explain depression as resulting from the individual's interpretation of stressful life events. Hopelessness depression as a stress-diathesis theory of depression claims that an attributional style interacts with negative life events to produce a particular subtype of depression with symptoms of loss of motivation, sadness, and suicidal ideation (Abramson, Metalsky, & Alloy, 1988).

Research suggests that women experience more stress during their lives than men. Hence, the impact of stress has more implications for depression. Simonds (2001) list the reasons why women's lives are more stressful reviewing an ample of research (p. 32):

"1. more women live in poverty than men;

2. women are more likely to have lower-status jobs;

3. women experience more role strain;
4. women are more affected by the other people's stress;
5. women are more often victims of violence; and
6. women are primarily the caretakers of children and the."

Simonds (2001) suggests that the interaction of multiple risk factors with the biological, sex role socialization, social, and developmental factors may put women at a higher risk for depression. Simonds also summarize the most stressing events as parenting caretaking, and interpersonal relationships, victimization, sex role socialization, social stressors such as workload and status, and poverty. She also lists a set of developmental stressors of women's lives such as adolescence as a pre-existing risk factor for girls than boys.

Several studies suggest that there is a robust correlation between the depressive symptoms and significant life stressors. According to Borba and Druss (2010), trauma in early life has been considered a risk factor for depression (e.g., Bifulco et al., 1991; 1998). Also, later significant life events such as loss, severe physical illness, or the interpersonal conflicts may have an impact on depression. Next, I will review some relevant studies concerning the relationship between depressive symptoms and life stressors,

Mazure, Bruce, Maciejewski, and Jacobs (2000) conducted a study in which reflected the relationship between major life events, and cognitive-personality factors with depression, as well as the responsiveness to antidepressants. The results have shown the adverse life events, sociotropy, and an autonomy factor need for control were each significantly related to depressive onset while the event types affected outcome differently. They have suggested that "Adverse life events are a potential element in predicting depression. However, cognitive-personality characteristics also confer susceptibility to depression. A better outcome is associated with the occurrence of adverse interpersonal events such as death of a loved one, rather than adverse achievement events (e.g., loss of job)" (p. 896).

Also, Keller, Neale, and Kendler (2007) investigated the association between different life events with distinct patterns of depressive symptoms. They have found the patterns of depressive symptoms associated with nine categories of adverse life events significantly. Deaths of loved ones and romantic breakups were marked by high levels of sadness, anhedonia, appetite loss, and (for romantic breakups) guilt. Chronic stress and, to a lesser degree, failures were associated with fatigue and hypersomnia, but less so with sadness, anhedonia, and appetite loss. Those who reported that no adverse life events caused their dysphoric episodes reported fatigue, appetite gain, and thoughts of self-harm, but less sadness or trouble concentrating (p. 1521).

Another study by Robins, Block, and Peselow (1990) analyzed if the relations of depression to dysfunctional attitudes and negative life events are mediated by the individual's perceptions of those events. Also, it analyzed the interaction hypothesis which states that the relation of depression to negative events is greater in the context of dysfunctional attitudes and/or event perceptions. The results revealed depressed patients reported more dysfunctional attitudes and a greater number of recent negative events. In addition, the mediation hypothesis was approved.

The study of Tiet, Bird, and their colleagues (2001) examined the relationship between specific life events and psychiatric disorders that suggested that major depressive disorder and dysthymia are significantly associated with many of the adverse life events examined.

Lastly, Moore, Schuman and their colleagues (1999) evaluated the frequency and predictors of severe adverse life situations and depressive symptoms among two groups of women: HIV-infected and uninfected. The findings suggest that HIV-infected and uninfected women reported numerous adverse life events and significant levels of depressive symptoms. Low socio-economic status, injecting drug and crack cocaine use, and high-risk sexual activity was related to reports of more adverse events and depressive symptoms for both groups.

Concludingly, according to the evidence-based studies, significant life stressors found to be constant predictors of depressive symptoms (i.e., You and Connor, 2013; Tennant, 2002). In the current study, the effect of significant life stressors will be compared to the effect of fundamental psychological needs. Next, I will review the interpersonal context of depression which was found to be a risk factor.

3.2.3. Interpersonal Context of Depression

Despite improved recognition and treatment of mood disorders, understanding the mechanics of the interpersonal context of depressive disorders remains a crucial area of scientific research (Rehman, Gollan, and Mortimer, 2008). This session provides an overview of the research within the interpersonal context of depression while highlighting a gap in the current depressive symptoms research.

Evolving intrapersonal conceptualizations of depression, based primarily on cognitive and biological perspectives, have been the dominant zeitgeist in academic psychology (Joiner, Coyne, and Blalock, 1999; Rehman, Gollan and Mortimer, 2008). Although these approaches elucidated the current understanding and conceptualizations of depressive symptoms, the interpersonal perspectives on depression remained excluded. Joiner and Timmons (2009) stated that historically, clinical approaches have minimized or overlooked the complex interpersonal context of the disorder, whereas depression is expressed in the behavior and interactions of individuals (p. 322).

Joiner and Timmons (2009; p. 325) briefly outlined the interpersonal relational characteristics of depressed people. “depressed individuals, compared to their nondepressed counterparts, have been characterized as lower in self-rated and actual social skills, as more negative in speech quality and content, as more likely to engage in aversive feedback-seeking behavior, as less likely to have animated facial expressions (except when sad), as exhibiting less eye contact, and as demonstrating fewer nonverbal gestures that indicate interest in others. The effects of these characteristics on the interpersonal environment are likely to be negative.”

Within the interpersonal context of depression, there are several risk factors associated with the onset and course of depression. According to Joiner and Timmons (2009), there are two non-exclusive approaches to investigating the interpersonal vulnerability to depression. First, many if the previously discussed behavioral and relational characteristics have been studied as risk factors. In addition, broader conceptualizations taken from personality or cognitive approaches have been

examined. They have addressed interpersonal behaviors such as social skills impairment (e.g., Eberhart and Hammen, 2006), excessive reassurance seeking (i.e., Davila, 2001), and negative feedback seeking (e.g., Pettit and Joiner, 2001) as vulnerability factors of depression. In addition to the behavioral characteristics, broader interpersonal styles have been related to depression. Interpersonal inhibition (e.g., Ball, Otto, Pollack, and Rosenbaum, 1994), interpersonal dependency (e.g., Beck, 1983), and attachment styles (Hankin, Kassel, and Abela, 2005) found to impact the susceptibility to depression.

Last, but not least, it is vital to concentrate on the interpersonal consequences of depression. The consequences spread from the individual impairment, loss of social status, to the *contagious* depression which is the transmission of depressive symptoms from one person to another (Rehman, Gollan, and Mortimer, 2008). Joiner and Katz (1999) provided the following conclusions regarding the interpersonal aspects of depression: "(1) There was substantial support for the view that depressive symptoms and mood are contagious, but the phenomenon was most pronounced in studies of depressive symptoms (vs. depressive mood). (2) Contagion of depressed mood/symptoms held across combinations of target × respondent gender. (3) There was some tentative evidence that contagion was specific to depressive versus other symptoms and moods."

As noted by Rehman, Gollan, and Mortimer (2008) some theories have attempted to explain depression using a relational viewpoint. Not surprisingly, given the immense social priority of marital relationships, researchers have focused on marital quality and dynamics as an effort to better understand the interpersonal difficulties of depressed individuals.

Coyne's interpersonal theory of depression (1976) postulated that the interpersonal behaviors of depressed individuals elicit rejection from others. When an individual is depressed, s/he seeks reassurance and support from others in the environment. Initially, individuals in the environment yield to these demands, but as time progresses and the demands continue, the depressive's behavior produces increasing hostility and resentment in others. Such feelings subsequently lead to guilt because the depressive person's distress is obvious. To inhibit hostility, those surrounding the depressed person respond to them with false reassurance and support. But are only partially successful in providing support. These behaviors lead to further alienation until eventually those surrounding the depressed person are forced to withdraw from them (Also see: Ruscher and Gotlib, 1988).

According to the stress generation model of depression, Hammen (1991) poses the hypothesis that the distinction between diathesis and stress may be unclear, and depressed individuals may inadvertently make behavioral choices that increase the subjective and objective indices of stress. The increase of stress partially clarifies the demoralization and depressogenic response of some individuals. Hammen and colleagues make a distinction between the effects of independent and dependent stressful events. Special significance is allocated to stressful events that are interpersonal in nature, as the theory suggests that depressed individuals may be particularly likely to create interpersonal stress in their lives.

Researchers usually pointed the effects of intramarital variables on depressive symptoms; the marital discord model of depression by Beach and colleagues (1990) "posits a longitudinal relationship between marital dissatisfaction and depression." Based on this theory, marital support is decreased through reductions in couple cohesion, perceived and actual coping assistance, self-

esteem support, spousal dependability, intimacy, and acceptance of emotional expression. The model also determines five facets of the marital relationship that can increase levels of stress and thus contribute to depressive symptoms: verbal and physical aggression, threats of separation and divorce, severe spousal denigration, criticism or blame, severe disruption of scripted routines, and major idiosyncratic marital stressors.

In addition to the mentioned theories, relational theories of women's depression are also based on caretaking and relationships in women's lives. Simonds (2001, pp. 36-38) summarized the interpersonal theories explaining *women*'s depression.

Kaplan (1991) described women's depression as correlated to the devaluation of the capacity to connect with others, a core principle of women's sense of self. Simultaneously, gender-based socialization leads to inhibition of anger, action, or assertiveness, and feelings of low self-esteem, including feelings of [over]responsibility and "badness" for relational difficulties.

Lerner (1987) explained women's depression as due to "self-sacrifice" or "de-selfing" (Lerner, 1987, p. 201) in relationships and the concomitant loss of self-esteem. De-selfing leads to difficulties with anger, either through inhibition of anger or constant anger (Lerner, 1988).

Jack (1987, 1991, 1999) developed a theory of women's depression called *Silencing the Self* Theory (STST). In a study of depressed married women, she found that women experienced a loss of self or self-silencing as a result of efforts to alter the self to meet the needs of the men they love. Expanding on Kaplan's and Jack's points of view, Stiver and Miller (1997) investigated many women's depressions as the result of disappointment in the significant relationships in their lives and their inability to act in ways that will improve such relationships. The recent conceptualization of depression in women is very close to the self-determination theory which postulates the fulfillment of the basic psychological need of *relatedness* reduces the risk for psychopathology. Later in this chapter, SDT literature will be comprehensively discussed.

Contrarily, there are few studies that have investigated the relationship between intimate relationships and depression in another way. Studies by Burns, Sayers, and Moras (1994) and Lamb, Lee, and DeMaris (2003) sought to investigate a causal relationship between getting married and depression. Lamb and colleagues (2003) declared that no evidence of selecting less depressed persons into either marriage or cohabitation was found. But a negative effect of entry into marriage on depression was obvious, particularly when marriage was not preceded by cohabitation. On the other hand, Burns et al. (1994) found that chronic low-level depression may have a stronger association with interpersonal problems rather than other forms of depression such as major depressive episodes. These two studies lay the foundation for this study. It is also mentioned that covenant marriage may reduce depressive symptoms in long-term, but during the first weeks of marriage, depressive symptoms can be experienced (Jones, 2014; Brock and Lawrence, 2011). In my dissertation, I investigate the possibility of depressive symptoms occurrence as a result of getting married. Next, in this session, other studies about the relationship between depression and marriage will be reviewed.

Investigating international research databases (including Psycnet and Psyc articles (APA databases), Ebsco host, Wiley, Proquest etc.) there are enormous studies on `the relationship between aspects of marriage and depression and the link between interpersonal relationships and

depression has received considerable theoretical and empirical attention (i.e., O'Leary and Beach, 1990; Coyne, 1976; Epstein, 1980; Jacobson, 1984; and Burns, Sayers, and Moras, 1994).

Rai Nho, Him, Jung Shin, and Hui Heo (2017) reported that acculturative stress, social support, marital dissatisfaction, life satisfaction and self-esteem as predictors of depression among marriage-based migrants in South Korea.

Besides, Thomeer, Umberson, and Pudrovska (2013) using a mixed-methods approach strived to investigate the extent to which depressive symptoms are gendered within marriage. They stated that wife's depressive symptoms influence her husband's future depressive symptoms, but a husband's depressive symptoms do not influence his wife's future symptoms. Also, the results of qualitative analysis of in-depth interviews with couples who experienced depression showed the importance of cultural scripts of masculinity and femininity in shaping depression and emotional processes within marriage (p. 151).

Uecker (2012) claims that the psychopathological effects of early marriage are the same as the effect of any other romantic relationship on the young adults. Shariff and Zakaria (2013) addressed child marriage as a determinant of depression after marriage.

Cao, Zhou, Fang, and Fine (2017) studied Chinese couples during the early years of marriage and assessed various aspects of marital well-being in relation to depression. Results of the research indicated the significant association between marital well-being and depression and on top, commitment and instability as major determinants of depression among couples.

Searching the ample of research for possible antecedents of depressive symptoms after marriage shows that the motivational factors for entering a marital relationship are significant determinants for the quality of relationship with partner and other aspects of the marriage. La Guardia and Patrick (2008) mentioned that the study of close relationships has been fundamental to the field of psychology since its inception, but the science of relationships is relatively young; "However in the macrocosm of relationships research, relatively little space has been dedicated to understanding the motivational underpinnings of the processes" (p. 201). Self-determination Theory (Deci and Ryan, 2000) is a framework for explaining both psychopathology and intimate relationships.

3.3. Self-Determination: A Unifying Theory of Close Relationships and Psychopathology

As mentioned in the theoretical framework, self-determination theory (Deci and Ryan, 1985, 2000, 2008, 2017) is a motivational framework for explaining many processes related to romantic relationships including marriage (La Guardia and Patrick, 2008; Knee, Hadden, Porter, and Rodriguez, 2013; Knee, Lonsbary, Canevello, and Patrick, 2005). This theory is known as "a theory of motivation that incorporates personality, developmental, and situational influences on optimal individual psychological well-being" (Knee et al., 2013). This theory is extensively used to discuss individual psychopathology, as well (Ryan and Deci, 2017).

3.3.1. Self-Determination Theory and Romantic Relationships

Since the inception of psychology as a science, studying the relationships has been fundamental to the field. Although, a formal relationship science has been developed within the last 25 years. Diverse theoretical frameworks have been applied to examine relationship processes such as intimacy, attachment, communality, and independence (La Guardia and Patrick, 2008). Two major perspectives of studying close relationships can be investigated: the spectrum of approach and avoidance in which evaluates the independent tendencies (e.g., Gable, 2006) and the self-determination theory approach (e.g., La Guardia, 2007) that concentrates on how relational partners either support or undermine the fulfillment of basic psychological needs.

"The value of this motivational approach is that while many relational behaviors appear to be oriented toward connecting with a partner, they may have more complex motivational structures and these structures may have their own consequences for personal well-being and relational functioning" (La Guardia and Patrick, 2008, p. 201). Also, many of the constructs discussed within relationships research are not differentiated by their motivational underpinnings, surface behaviors and outcomes measured may not comprehensively depict healthy functioning. Hence, by defining the motivational underpinnings of important relational behaviors, we demonstrate that we are able to identify the circumstances under which seemingly positive behaviors are more or less beneficial for the person and for the relationship (Laguardia and Patrick, 2008).

To investigate close relationships through the lens of SDT, two approaches have been applied. The first concentrates on the concept of basic psychological needs and how relational partners either support or undermine the fulfillment of these needs. The other approach investigates how motivational orientations toward relational activities can be maintained or transformed. La Guardia and Patrick (2008) reviewed the current literature on self-determination in the context of close relationships. They have summarized the role of need fulfillment (i.e., Patrick, Knee, Canavello, and Lonsbary, 2007), attachment (i.e., Leak and Cooney, 2001), Intimacy (i.e., Ryan, La Guardia, Butzel, Chirkov, and Kim, 2005), and the dynamics of need support (La Guardia, 2007) as the core areas of research in the field. Additionally, Knee, Hadden, Porter, and Rodriguez (2013) have investigated the SDT approach to romantic relationship processes. Also, Knee, Lonsbary, Canevello, and Patrick reviewed the conflict in romantic relationships using SDT perspective.

The core organizing concept of SDT is the basic psychological needs. The three basic needs of autonomy, competence, and relatedness underlie both growth and vulnerability (Vanteenskiste and Ryan, 2013). As social species, human needs are fulfilled or frustrated within the social context. "social environment is thus key to whether needs are enhanced versus thwarted and consequently whether optimal functioning will be impeded" (La Guardia and Patrick, 2008, p. 202).

"While it is possible that certain relationships may be more important for meeting certain needs (e.g., competence support by coworkers; relatedness support by romantic partner), the relative presence or absence of support for all three needs is vital in each relational context. That is, when any of the needs are notably unsupported in a given context, optimal personal functioning as well as functioning within the specific social context is expected to suffer. Thus, relationship-

specific need support has important implications or personal health as well as the dynamic functioning within partnerships." Mentioned by La Guardia and Patrick (2008; See also: Knee et al., 2013).

Knee and colleagues (2013) have summarized the key relationship variables related discussed using the self-determination approach (also see Weinstein and DeHaan, 2014). They have mentioned attachment (e.g., Feeney and Thrush, 2010), self-expansion (e.g., Linardatos and Lydon, 2011), contingent self-worth (e.g., Hodgins, Brown, and Carver, 2007), interpersonal goals (e.g., Crocker, 2011), risk regulation (Hodgins and Knee, 2002), and interpersonal processes of intimacy as the key relational variables associated with the basic psychological needs. In accordance with the present literature, self-determination theory can also be used in understanding the psychopathology caused by or within marital relationships.

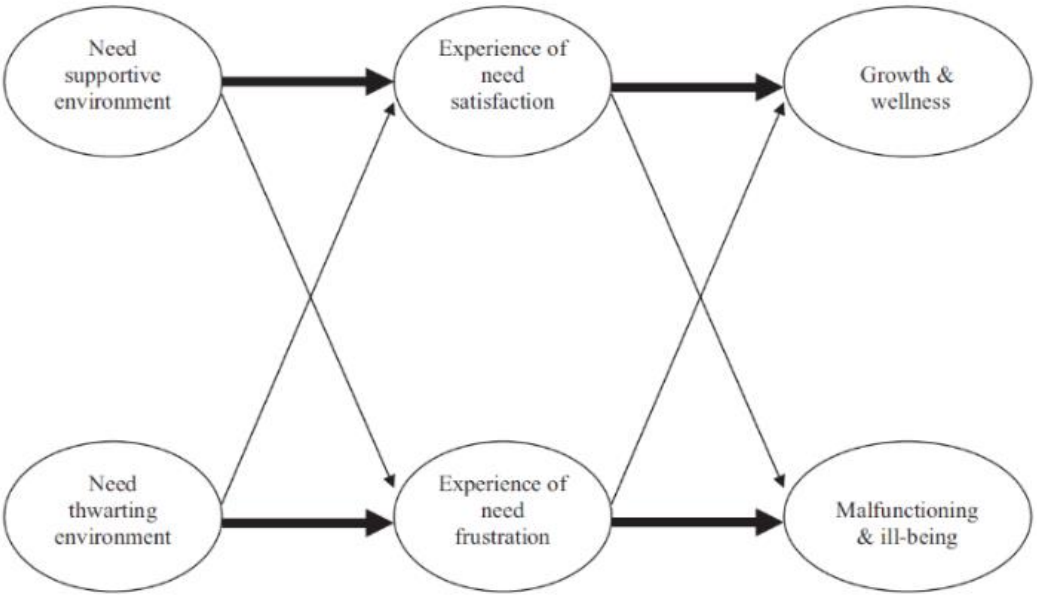
Support of these basic psychological needs facilitates the development of self-determined motivation. Importantly, individuals' social environments—their caregivers, romantic partners, teachers, friends, families, and larger social ties— can provide ongoing support for these needs to varying degrees. Empirical support for this process comes from studies indicating that, for example, people are more securely attached to, and more likely to emotionally rely on, those who meet their needs for autonomy, competence, and relatedness (La Guardia, Ryan, Couchman, & Deci, 2000; Ryan, La Guardia, Solky-Butzel, Chirkov, & Kim, 2005), and that fulfillment of these psychological needs predicts general well-being (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000; Sheldon et al., 1996), and relational well-being (Patrick, Knee, Canevello, & Lonsbary, 2007). In addition, individuals' perceptions that their friends support their autonomy strivings predict greater overall need satisfaction and positive relationship quality (Deci, La Guardia, Moller, Scheiner, & Ryan, 2006).

3.3.2. Self-Determination Theory: Growth and Vulnerability

Scholars in the clinical fields of social work or psychology have primarily concentrated on the maladaptive and dysfunctional dimensions (Cicchetti and Blender, 2006) while the positive psychology movement has focused on what contributes to the individual's growth (Sheldon and King, 2001). In a systematic review Vanteenkiste and Ryan (2013, p. 263) sought the "evidence that both people's healthy tendencies toward growth and integrity and their vulnerabilities to ill-being and psychopathology can to a significant degree be explained by an underlying principle of basic psychological need satisfaction and frustration that can substantially account for both the "dark" and "bright" side of people's functioning." In the present session, based on the findings of Vanteenkiste and Ryan (2013), I will review both positive and pathological outcomes of the basic psychological needs satisfaction and frustration with a concentration on the depressive symptoms, and two other motivational variables leading to the explanation of relationships between the variables in the current research.

Vanteenkiste and Ryan (2013) depicted the overview on the role of need satisfaction and frustration in ill-being and well-being in a theoretical model (figure 2).

Figure 2
The graphic overview of the self-determination role in well-being and pathology



Note. Adapted from Vanteenkiste and Ryan (2013)

According to the model presented above, the satisfaction of basic psychological needs leads to growth and wellness, while the frustration of the basic needs results in malfunctioning and ill-being. Also, they considered the role of environmental factors in their model.

Vanteenkiste and Ryan (2013) stated that although many theories suggest that environments impact development, SDT specifies both mechanisms that are involved in integration and psychological growth and the elements of the social environment that facilitate or undermine growth process. According to Deci and Vanteenkiste (2004), SDT's approach to growth and vulnerability derives from the assumptions key to its *organismic-dialectical* metatheory.

Vanteenkiste and Ryan (2013) mentioned that "Apart from contributing to the growth processes of intrinsic motivation and internalization, dozens of studies have indicated that the satisfaction of the basic psychological needs is related to indicators of wellness. Such findings have been reported (a) at the interindividual level, with those reporting more psychological need satisfaction feeling better about themselves (e.g., increased self-efficacy; Diseth, Danielsen, and Samdal, 2012) and their lives in general (e.g., meaning of life; Weinstein, Ryan, and Deci, 2012); and (b) at the intrapersonal level."

Vanteenkiste and Ryan (2013) specify the three trends of recent literature on this topic: objective benefits of needs satisfaction, work domains, and the universality of benefits. Briefly, the benefits associated with need satisfaction are increasingly being linked with *objective* outcomes. For example, Orkibi and Ronen (2017) found that the more satisfied the basic psychological needs are, the score of social skills increase. In the domains of work and education (e.g., Van der Elst, Van den Broeck, De Witte, & De Cuyper, 2012; Reeve & Tseng, 2011) the association between need satisfaction and enhanced *engagement* has been well documented. Third, an increasing

number of studies have provided evidence for the universality claim of SDT, namely, that all persons would benefit from basic need satisfactions regardless of race or cultural values.

As a motivational model to depression hypothesized for this research, two motivational correlates of basic psychological needs were selected as the mediators of the model. Both marital self-efficacy and general purpose in life are well-being constructs. Next, the related studies are being reviewed.

No specific study precisely addressed the relationship between basic psychological needs and marital/relational self-efficacy. But a few studies addressed other dimensions of self-efficacy. A study by Diseth, Danielsen, and Samdal (2012) addressed the path analytic model of basic psychological needs support and self-efficacy. The structural model described basic need support as predictors of self-efficacy and achievement goals, which in turn predicted academic achievement level and perceived life satisfaction.

A longitudinal intervention study by Martinek, Hofmann, and Kipman (2016) pointed out that perceived self-determination, self-determined academic regulation, and self-efficacy contribute to school-related well-being.

Reić Ercegovac and Bubić's (2016) study on the relationship between basic psychological needs and attitudes and expectations about marriage suggests that the need for relatedness as the only significant predictor of intimacy goals. While the intimacy goal and the need for autonomy were identified as significant predictors of marriage idealization tendencies, the need for autonomy and marriage idealization tendencies were identified as significant predictors of attitudes towards divorce. The findings confirm the importance of basic psychological needs in defining the attitudes and expectations towards future marriage and divorce.

Garrin (2014) proposed an integrated model of self-efficacy and basic psychological needs to foster social change concentrating on the common factors of both theories: competency and agency. In the hypothetical model, the role of self-efficacy describes as "*enhanced competency perceptions lead to perceived controllability, enhanced approach/challenge orientations, and the potentiation of leadership drives.*" In addition, he describes the role of basic psychological needs as contributing to self-efficacy beliefs. "*Enhanced competence, autonomy, and relatedness perceptions lead to enhanced skill mastery, psychological freedom, and ideologically congruent choices*" (p. 47).

Lastly, a study by Babenko and Oswald (2018) stated that both basic psychological needs and self-efficacy lead university students to select mastery goals during their education. The results indicated that of the three basic psychological needs, the need for competence was significant in explaining both types of mastery goals. Self-efficacy and self-compassion were significant in explaining mastery-approach and mastery-avoidance goals, respectively.

The sense of meaning and purpose is a defining factor of being *human*; I included 'general purpose in life' to the thesis to compare the effects of a relationship-specific variable (marital self-efficacy) with a general sense of purpose, as a more multidimensional variable. A handful of studies have shown the relationship between basic psychological needs and meaning/purpose in life. An extensive review of the self-determination approach to the meaning of life, presented by Weinstein,

Ryan, and Deci (2012) suggests that the basic psychological needs impact the process of meaning making, deeply internalizing meanings, values, and practices, and the contents of the meanings or life purposes that people endorse. Following, the related literature is discussed.

Eakman (2014) conducted a longitudinal study testing the relationship between meaningful activities, basic psychological needs fulfillment, and the meaning of life. The results indicated that the change in meaningful activity explained both change in basic psychological needs fulfillment (i.e., autonomy, competence, relatedness) and change in meaning in life. It was also reported that change in meaningful activity might influence change in meaning in life through two pathways: a direct path of influence from meaningful activity to meaning in life and an indirect path through change in basic psychological needs fulfillment (p. 93).

Çelik and Tezkan (2017) investigated the mediating role of basic psychological needs in the relationship between self-determination and meaning of life. According to the results, the satisfaction of basic psychological needs fully mediated the relationship self-determination between and meaning in life.

As global meaning of life promotes several forms of well-being, Hadden and Smith (2017) performed a diary study evaluating the possibility of 'meaning in life' as a basic psychological need. In their studies, meaning of life consistently predicted the well-being, and the effect was stronger than basic psychological needs. Consequently, they assume the sense of meaning and purpose in life to be a basic psychological need.

Additionally, Demirbaş-Celik and Keklik (2018) investigated the association between personality factors and meaning of life, with basic psychological needs mediating the relationships. The results revealed that each psychological need (competence, relatedness, and autonomy) partially mediated the relationship between stability and presence of meaning in life. On another hand, only competence and relatedness partially mediated the relationship between plasticity and search of meaning. Further evidence on adaptive consequences of basic psychological needs can be accessed in Ryan and Deci's (2017) extensive review of self-determination theory and well-being.

The self-determination theory also represents the costs of need frustration and thwarting. As postulated by Vanteenkiste and Ryan (2013, p. 268) "when basic psychological needs are obstructed, two likely consequences follow. First, people pay an immediate cost, as indexed by greater ill-being. Second, when needs are chronically thwarted, people develop a number of coping strategies to accommodate the experience of need frustration, including the development of *need substitutes* and engagement in *compensatory behaviors*." The present study focuses on the first consequence of psychological needs frustration: the immediate ill-being. According to Ryan and Deci (2017), Social contexts can either support or thwart satisfaction of basic psychological needs and, consequently, differentially buffer or potentiate vulnerabilities for the spectrum of psychopathologies. They have considered three categories of psychopathology related to the basic psychological needs. "The first involves autonomy disturbances that take the form of rigid internal regulations that result from introjection or compartmentalized identification and includes the obsessive and paranoid disorders, as well as controlled eating disorders and self-critical depression; A second type comprises disorders for which failures to internalize effective regulations are a central feature. This type includes conduct and antisocial disorders. A third type involves serious

intrusive and need-thwarting experiences that lead to personality fragmentation and impaired emotional regulation. Borderline personality disorders and dissociative personality disorders are examples" (p. 401).

During the past years, with the emergence of the field of *developmental psychopathology* (e.g., Cicchetti, 2016), it has become progressively evident that when the appropriate social nutrients are not provided, the negative effects on development can be manifold, impacting biological, psychological, and social capacities. SDT specifically investigate the development of psychopathology in terms of the array of interacting factors that can impinge upon or fail to buttress the natural processes that yield healthy development and flourishing (Ryan and Deci, 2017, pp. 401-402). Ryan and Deci (2017) emphasized the effect of frustration of basic needs on 'introjective depression.' More recent evidence supports the correlation between basic psychological needs and depression. As this research will be conducted in a Middle Eastern context, it is important to mention the previous literature concerning both depression and basic psychological needs as culturally sensitive constructs. Plant and Sachs-Ericsson (2004) claimed that the minority groups have more problems meeting their basic needs which are associated with higher risk for depression and depressive symptoms.

It is also mentioned that basic psychological needs play a significant role mediating loneliness and depression (Wei, Shafferi, Young, and Zakalik, 2005). Searching the Iranian research database (SID), Ghorbani and Hossein Sabet (2016) reported a significant association between depression and basic psychological needs.

According to Steger and Kashdan (2009) satisfying basic psychological needs through partner is beneficial for everyone, nonetheless, it is more fruitful for those experiencing depression or any subclinical type of depressive symptoms because they are less able to satisfy their needs through themselves and they are more vulnerable to whether their partners satisfy their basic psychological needs. This can be discussed through the fact that depressed individuals are more hypersensitive to signs of social rejection (Allen and Badcock, 2003; also see Ibarra-Rovillard, and Kuiper, 2011).

One index related to depression is suicidal ideation. In an effort to explain the relationship between suicidal risk and ideation, Britton, Van Orden, and their colleagues (2014) found that Young adults whose basic psychological needs are met may be less likely to consider suicide and engage in suicidal behavior.

Kormas, Karamali, and Anagnostopolous (2014) investigated the relationship between attachment anxiety and depression considering the satisfaction of basic psychological needs as mediator. They stated that basic psychological needs satisfaction partially mediated the relationship between attachment anxiety and depression.

Wei, Shaffer, Young, and Zakalik (2005) drew their attention to the mediation role of basic psychological needs in relationships between attachment anxiety, shame, depression, and loneliness. The findings underline that basic psychological needs satisfaction partially mediated the relationship between attachment anxiety and shame, depression, and loneliness and fully mediated the relationship between attachment avoidance and shame, depression, and loneliness. Additionally, basic psychological needs explained 72% of the depression variance.

Leow, Lee, and Lynch (2016) applied SDT perspective to the relationship between big five personality factors and depressive symptoms using a structural equation method. The findings, however, indicated that autonomous self-regulation significantly predicted lower levels of depressive symptoms, while controlled self-regulation significantly predicted higher levels of depressive symptoms. The strongest predictor of the students' depressive symptoms was the quality of their relationships with others, rather than autonomy.

Chen, Vanteenkiste, and their colleagues (2014) evaluated the role of basic psychological need satisfaction and frustration in several studies and cultures. It was revealed that satisfaction of each of the three needs was found to contribute uniquely to the prediction of well-being, whereas frustration of each of the three needs contributed uniquely to the prediction of ill-being. Also, the effects of need satisfaction and need frustration were found to be equivalent across cultures and were not moderated by individual differences in the desire for need satisfaction. These findings underscore SDT's universality claim, in which states that the satisfaction of basic needs for autonomy, relatedness, and competence represent essential nutrients for optimal functioning across cultures and across individual differences in need strength (p. 216).

Other studies also pointed out the relationship between basic psychological needs and depressive symptoms or depression. Ibarra-Rovillard and Kuiper (2011) developed a social negativity model of depression considered the perceived responsiveness to basic psychological needs as the mediator. Consistent with the previous literature this theoretical model explains both the positive and negative effects that social relationships have on the well-being of depressed individuals. Also, Lu, Uysal, and Teo (2011) explored the relationship between needs satisfaction and depressive symptoms which were found to be significant. Furthermore, Souesme, Martinent, and Ferrand (2016) reported significant relationships between autonomy support, basic psychological needs satisfaction and lower rates of depressive symptoms. Additionally, Gauthier, Guay, Senécal, and Pierce (2010) investigated the depressive symptoms during the transition to motherhood seeking the role of competence, autonomy, and relatedness. Results based on structural equation modeling provide some support for the effect of perceived needs satisfaction on subsequent depressive symptoms during the postpartum period. Some studies also investigated the racial and ethnic differences in depressive symptoms using the SDT perspective (i.e., Plant and Sachs-Ericsson, 2004). Concludingly, the present study aims to add to the literature of needs satisfaction and to fill the gap in the literature of needs frustration in an interpersonal context. Next, the literature regarding mediator variables and depression will be briefly outlined.

3.4. Depressive Symptoms, Purpose in life, and Self-Efficacy: Brief Review

Several studies have investigated the adaptive correlates of depressive symptoms. Self-efficacy as the beliefs of an individual regarding her/his ability in a specific dimension has been studied in relation to depressive symptoms. Some featured studies are reviewed below.

Maddux and Meier (1995) proposed a self-efficacy model of depression. "Self-efficacy theory is concerned with the relationship between cognitions of self-devaluation and coping inability and the initiation and persistence of coping behaviors in the face of obstacles-concerns that are highly relevant to understanding depression" (p. 144). Bandura (1992) states that three

types of self-efficacy beliefs influence depression (Bandura, 1992; Maddux and Meirer, 1995). People may feel incapable to obtain standards of achievement or performance that would bring personal satisfaction (Kanfer & Zeiss, 1983). Second, people may suppose that they are incompetent of developing satisfying and supportive relationships with others (Anderson & Arnoult, 1985; Yusaf & Kavanagh, 1990). Third, they may believe they are unable to control disturbing depressive ruminations (Kavanagh & Wilson, 1989). The second type of self-efficacy beliefs mentioned by Bandura shapes the central idea of marital self-efficacy which seeks the beliefs about managing and maintaining romantic relationships.

Additionally, other studies in various fields have revealed the relationship between self-efficacy and depression. Scott and Dearing (2012) investigated the longitudinal relationship between self-efficacy domains and depressive symptoms they found that not only did youths with relatively high self-efficacy have lower depressive symptom levels than other youths, but also increases in efficacy beliefs for academic, social, and for resisting negative peer influences predicted decreases in depressive symptoms *within* youths, even after controlling for previous levels of depressive symptoms. Also, Saltzman and Holahan (2002) presented an integrative model of social support, self-efficacy, and depressive symptoms in which self-efficacy fully mediated the relationship between social support and depressive symptoms. In addition, Gilliam and Steffan (2006) have reported lower levels of depressive symptoms in the individuals with higher caregiving self-efficacy in the dementia context.

A great deal of research has been conducted regarding meaning in life, mentioned Steger (2012) who have reviewed the associations between meaning/purpose in life with psychopathology. As he mentions "One of the most influential ideas to arise from Frankl's (1963) writings was that the attitude one takes toward suffering is a route to meaning" (p. 172). As Steger (2012) states, some suffering may be unavoidable; and being able to endure such suffering in a manner that reduces its damage to the self, relationships, and life should provide deep meaning for people. On the other hand, not all individuals are able to seek meaning in the context of their suffering and threats. In such situations, the psychopathology appears. Thus, we can conclude that beyond the meaning-making as a result of potential psychopathology, an individual may benefit from the buffering effect of meaning of life while facing adversity. Several studies have shown that the sense of meaning/purpose in life reduces the probability of experiencing maladaptive symptoms.

As Kish and Moody (1989) indicated that a good sense of life purpose was accompanied by a lower degree of psychopathology in an alcoholic population. They have also mentioned that lack of meaning and purpose in life was related to a wide variety of psychological syndromes. Also, Lyon and Younger (2001) investigated that in an HIV-infected population, the meaning of life was lower, and the depressive symptoms seemed to be of a higher score. It was significant that in their study purpose in life was a stronger predictor of depressive symptoms than was HIV disease severity. Additionally, Mascaro and Rosen (2005) revealed that the existential meaning enhanced individuals' hope and prevented the depressive symptoms. Lastly, Owens, Steger, Whitesell, and Herrera (2009) found that using hierarchical regression, younger age; higher levels of combat exposure, depression, and guilt; and lower meaning in life predicted greater PTSD severity.

Summary

The hypothesis of the research is that basic psychological needs satisfaction is a significant negative predictor of the depressive symptoms in marital context while the frustration of needs is a significant positive predictor of depressive symptoms. On the top, the general purpose in life might be a stronger mediator for the relationship between BPNSF and depressive symptoms than the marital self-efficacy. In this chapter, the relationships between the key research variables have been investigated, as well as reviewing the fundamental theories explaining depressive symptoms and basic psychological needs.

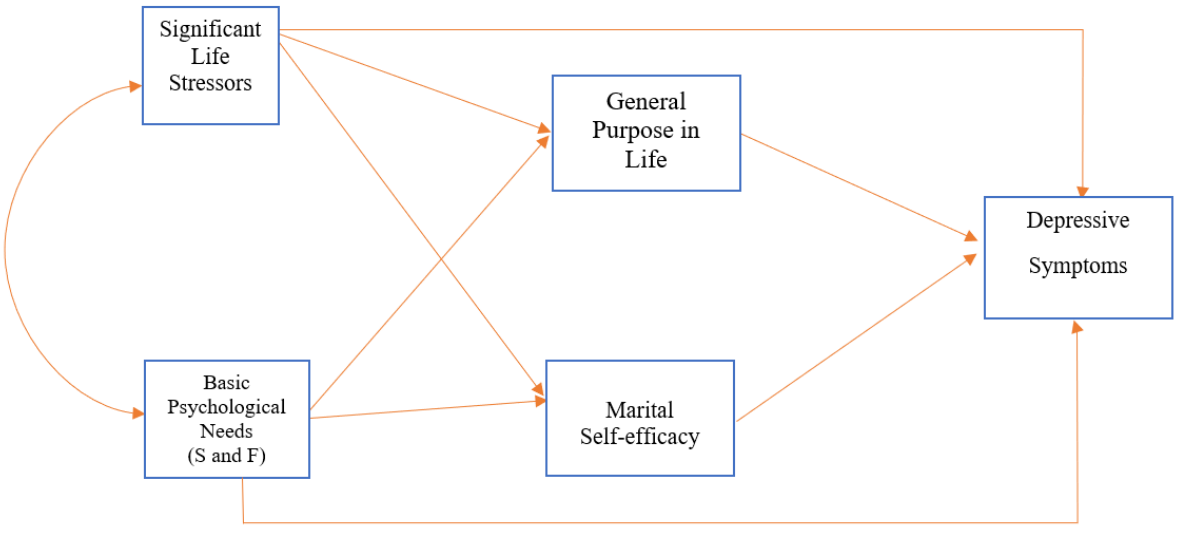
Chapter 4
Methodology

4.1. Introduction

The chapter describes the research design that was used to examine factors related to depressive symptoms in its marital context. The chapter begins with the epistemological roots of quantitative research. The research design incorporates the approach used, participants and sampling, data collection, and statistical analyses. This chapter ends with ethical considerations and the limitations to study.

The present study employed a non-experimental, correlational research design using a survey research method. Participants completed surveys that measured their (a) basic psychological needs satisfaction and frustration, (b) significant life stressors, (c) general purpose in life, (d) marital self-efficacy beliefs, and (d) depressive symptoms. They have responded to a demographic questionnaire, as well. Structural equation modeling (SEM) was used to test a proposed model of the relationship between variables (figure 3).

Figure 3
Hypothesized relationships Between Variables



The present study sought to answer the following research questions:

- Are basic psychological needs satisfaction and frustration related to the depressive symptoms?
- Is significant life stressors score related to the depressive symptoms?
- Do ‘general purpose in life’ and ‘marital self-efficacy’ mediate the relationships between dependent and independent variables?
- How is the goodness of fit in the hypothesized model?

Quantitative research emphasizes the importance of relying on pretested theories and objective measurements (Bryman, 2016). Thus, a quantitative approach was applied in this study to offer numerical descriptions of the relationships between variables. This method is concerned with questions based on the strength of relationships, causes and effects, and an objective point of view (Clarck-Carter, 2010). This approach emphasizes the 'quantification' of behavioral and social variables and the strength of relationships between variables which seeks the power to 'predict' human behavior (Ary, Jacobs, Razavieh, and Sorensen, 2009). The quantitative approach describes the questions objectively and in terms of numbers. The researcher has a neutral role in the process of data collection and analysis. Consequently, quantitative method is apart from researcher's presumptions (Barker, Pitsrang, and Elliot, 2016) which is essential for suggesting models in social research.

4.1.1. Induction and Deduction

Among all quantitative methods, Structural Equation Modeling (SEM) was applied in this research. '*Modeling*' refers to "the development of theory through the construction of models to account for the results of the research and to explore more fully the consequences of theory" (Clarck-Carter, 2010; p. 6). Using structural equation modeling requires an inductive view. It is an effort to find causal relationships between variables. In other words, researchers have often utilized SEM to examine if hypothesized conceptual models and structural relationships at the conceptualization stage are supported the empirical data provided by their study sample (Bollen, 1989; Kline, 2010). As mentioned by Clarck-Carter (2010) the consequences of the suggested model can then be the subject to empirical research to test how well the model represents reality. Kim, Sturman, and Kim (2015) stated that SEM is usually inductive in principle, although the confirmatory factor analysis (the first phase of SEM) is deductive since it measures the reliability of a priori construct using the sample data. Therefore, despite the dominant adoption of an inductive approach in this study, the process was not absolved from some degree of deduction.

4.1.2. Limitations of Quantitative Method

As Clarck-Carter (2010) specified, quantitative methods are useful for precise description and comparison. Several advantages were mentioned for this type of research such as a well-developed theory of reliability and validity in the measurements, well-established methods of analysis, facilitating comparison and fitting in well with the hypothetico-deductive approaches.

Despite the advantages mentioned and the benefits of generalizability and interpreting causality in the quantitative research, it has been heavily critiqued, especially by qualitative researchers. The positivist quantitative stance has been severely criticized both from within and outside social sciences (e.g., Bryman, 2016; Koch, 1964; McGrath and Johnson, 2003). "When carried through rigorously, it leads to draconian restrictions on what can be studied or talked about. Psychological constructs that attempt to capture important aspects of experience such as feelings, values, meanings, are ruled out of the court. It leads to a sterile and trivial discipline alienated from human experience, so that some researchers seem to lose sight of the people behind the statistics" (Clarck-Carter, 2010, p. 57).

As Bryman (2016) mentions, it fails to distinguish people and social institutions from 'the world of nature.' Through the lens of phenomenology, it is important to understand the lived experiences of people which is not objective and cannot be quantified. Bryman (2016) also mentions lack of connection between everyday life and research, as well as statistical limitations as shortcomings of the quantitative perspective (p. 166). Quantitative methods fail to describe the world as an individual's personal construct which provides a superficial understanding of variables such as emotions, attitudes, and beliefs (Leavy, 2017).

A critical limitation of quantitative methodology in social sciences is measurement, especially in non-experimental designs. Although the quantitative methodology is not intended to provide a static view of social life, measurement constraints lead to a reductionist evaluation of human behavior (Creswell, 2014) which is discussed more in-depth later in this chapter.

4.1.3. Epistemological and Philosophical Underpinnings

A researcher's philosophical stance is the cornerstone for investigating phenomena in the social world which subsequently leads to methodology selection (Leavy, 2017).

Ontological (the study of reality, Gray, 2013; Guba and Lincoln, 1982) and epistemological (the basis of acceptable knowledge; Bryman, 2016; Leavy, 2017) presumptions of quantitative research on human behavior lead to 'positivism' and 'objectivism' as philosophical underpinnings (Clarck-Carter, 2010).

4.1.4. Positivism

Quantitative research often finds its roots in the positivist paradigm (Leavy, 2017; Creswell, 2014). This ontological position is often associated with narrowing down the variables and studying them objectively. Positivism holds a deterministic viewpoint in which causes (probably) determine the effects or outcomes (Creswell, 2014) that affirms the suitability of positivist approach for studying a causal relationship between basic psychological needs, significant life stressors and depressive symptoms.

The positivist doctrine applies the methods of the natural sciences to the study of social reality and beyond (Bryman, 2016, p. 24). It implies the fact that scientific attention should be restricted to observable facts which reflects science as being objective and value-free (Clarck-Carter, 2010, p. 56).
It is also reductionist in that the intent is to reduce the ideas into a small, discrete set to test. Knowledge here is conjectural and antifoundational. Thus, absolute truth can never be found (Creswell, 2014).

The positivist approach was incorporated into the study of human behavior in the form of '*methodological behaviorism*' which was concentrated only on observable behaviors or external reflections of characteristics. Nowadays, this fundamentalist view of human behavior has been replaced with flexible methods of measurement (Clarck-Carter, 2010).

4.1.5. Objectivism

Objectivism, as an ontological position, implies that social phenomena confront us as external facts that are beyond our reach or influence. In other words, social phenomena and their meanings have an existence that is independent of social actors. Consistent with the positivist view, objectivism leads the researcher to not to interpret data based on his/her value system, intentions or inference of the world (Bryman, 2016).

Concludingly, these two views fit in well with the intentions of the present study to develop a model of depressive symptoms in newlywed Iranian women.

4.2. Research Design

The present study employed a non-experimental correlational research design. Variables were analyzed using structural equation modeling to determine the strength of the relationship between them (Kline, 2016). While most correlational research does not allow one to inference causation, structural equation modeling path analysis provides a good sense of the direction in which variables are related (Kline, 2016). Non-experimental correlational research is a frequently-used approach in studying behavioral variables. It allows for existing variables to be measured without being manipulated by an experimental environment (Raykov and Marcoulides, 2006). This allows for a good understanding of how phenomena can be predicted.

In this study, data were collected using a survey research method. This approach was chosen because of the nature of the variables being studied. All the variables in this study were subjective, or not directly observable, and therefore could best be measured using a self-report format, such as a survey or interview (Bryman, 2016; Creswell, 2014). Surveys were chosen for this study because they are simple to administer and provide clear numerical data to the researcher (Leavy, 2017).

Although surveys are widespread in studying human behavior, survey research has some limitations. Compared to interviews, surveys produce less detailed and nuanced data. Surveys also lack the controlled environment of experimental research, thus making it difficult to understand why participants responded the way they did (Ary et al., 2008).

4.2.1. Structural Equation Modeling

Structural equation modeling (SEM) is a series of statistical methods that allow complex relationships between one or more independent variables and one or more dependent variables (Teo, Tsai, and Yang, 2013). Though there are many ways to describe SEM, it is most commonly thought of as a hybrid between some sort of analysis of variance (ANOVA) or regression and some form of factor analysis. In general, it can be remarked that SEM allows one to perform some type of multilevel regression on factors. In other words, "the term structural equation modeling (SEM) does not designate a single statistical technique but instead refers to a family of related procedures. Other terms such as covariance structure analysis, covariance structure modeling, or analysis of covariance structures are also used in the literature to classify these techniques under a single label" (Kline, 2016, p. 9).

As noted by Teo, Tsai, and Yang (2013, p. 3), "the use of SEM in research has increased in psychology, sociology, education, and economics since it was first conceived by Wright (1918), a biometrician who was credited with the development of path analysis to analyze genetic theory in biology (Teo & Khine, 2009). In the 1970s, SEM enjoyed a renaissance, particularly in sociology and econometrics (Goldberger & Duncan, 1972). It later spread to other disciplines, such as psychology, political science, and education (Kenny, 1979)".

Models analyzed in SEM generally assume probabilistic causality, not deterministic causality. The latter means that given a change in a causal variable, the same consequence is observed in all cases on the outcome variable. In contrast, probabilistic causality allows for changes to occur in outcomes at some probability <1.0. Estimation of these probabilities (effects) with sample data are typically based on specific distributional assumptions, such as normality. Causality as a functional relationship between two quantitative variables is preserved in this viewpoint, but causal effects are assumed to shift a probability distribution (Mulaik, 2009; Kline, 2016).

4.2.2. Types of Models in SEM

Using SEM, the researchers can test various types of models. Raykov and Marcoulides (2006) noted four categories that are commonly cited in the literature. (1) Path analytic models (PA), (2) Confirmatory factor analysis models (CFA), (3) Structural regression models (SR) (4) Latent change model (LC) are the types that are widely used in social sciences.

Path analytic (PA) models are conceived regarding observed variables. Confirmatory factor analysis (CFA) models are commonly used to examine patterns of interrelationships among various constructs. Each construct in a model is measured by a set of observed variables. Structural regression (SR) models build on the CFA models by postulating specific explanatory relationship (i.e., latent regressions) among constructs. Latent change (LC) models are used to study change over time. For example, LC models are used to focus on patterns of growth, decline, or both in longitudinal data and enable researchers to examine both intra- and inter-individual differences in patterns of change (Teo, Tsai, and Yang, 2013). A combination of the first three models was used to analyze the data in this study, mainly a path analytic one.

4.2.3. Path Analysis

"Path analysis is an approach to modeling explanatory relationships between observed variables. The explanatory variables are assumed to have no measurement error (or to contain an error that is only negligible). The dependent variables may contain an error of measurement that is subsumed in the residual terms of the model equations, that is, the part left unexplained by the explanatory variables. A special characteristic of path analysis models is that they do not contain latent variables" (Raykov and Marcoulides, 2006, p. 77).

In the present study, path analysis was performed using Amos Statistical software. Using Amos was used to determine the predictive power of variables. To interpret the Goodness of Fit indices of the recommended model, proposed models were compared using AMOS software.

4.3. Independent Variables

This study measured two independent variables: Basic Psychological Needs Satisfaction and Frustration (BPNSF) and Stressful Life Events (SLE).

Basic Psychological Needs were conceptualized through the lens of Self-determination theory (SDT; Deci and Ryan, 1985; 2000; 2008). SDT defines needs as "*inner psychological nutriments that are essential for ongoing psychological growth, integrity, and well-being*" (Deci and Ryan, 2000, p. 229). Three basic needs using SDT framework are the need for autonomy, competence, and relatedness. Basic Psychological Needs Satisfaction and Frustration Scale (BPNSF; Chen, Vansteekiste, et al., 2015) were used to measure this variable.

Significant life stressors are the situations in which people experience severe anxiety, stress, or provocative distress. It was measured using Stressful Life Events Questionnaire (Bergman, Sarkar, O'Connor, Modi, and Glover, 2007).

4.4. Dependent Variables

The present study assessed three dependent variables that two of them mediate the relationships between variables, and one was the endogenous variables of the model.

Perceived Marital Self-Efficacy is the set of beliefs, and expectations spouses hold about the extent they can communicate openly and confide in each other, share feelings, aspirations, and worries, provide each other with emotional support and beyond to maintain a satisfying relationship (Caprara, Regalia, Scabini, Barbaranelli, and Bandura, 2004). This construct was measured by the Perceived Marital Self-Efficacy Scale (Caprara et al., 2004).

General purpose in life refers to the goal orientation of individuals based on the rationale that the goals are the manifestation of life purpose (Emmons, 2005). It was measured using Byron and Miller-Perrin's (2009) General Life Purpose scale.

The Center for Epidemiologic Studies Depressive Symptom scale (Radloff, 1977) was used to measure depressive symptoms as the endogenous variable of the model. Depressive symptoms are defined as the main signs of anhedonia, loss of interest, and low mood together with other psycho-physiological features according to DSM-5 (American Psychiatric Association, 2013).

4.5. Participants and Sampling

4.5.1. Study Population

The present study aimed to understand the factors related to experiencing depressive symptoms in currently-married women in their early years of marriage. The study population for the research of this dissertation comprised all newlywed women in the Shiraz University Psychotherapy and Counseling Clinic and its related sub-organizations who fulfill the inclusion and exclusion criteria. They were selected from the general population of clients, meaning that they were not involved in any therapeutic process at the time. Rather, they were related to the center to document their health

profiles as a requirement from the university. They could be either academic and administrative staff, students, assistants or the individuals who have decided to use the services from university clinics and hospitals. Most of the participants were students and academic staff, while around 30 percent of them were not affiliated with Shiraz University.

The participants were selected using a purposive sampling method. 350 women were enrolled to respond to the surveys in a period of 45 days. They voluntarily accepted to join the study. It could be either the referral from one of the psychologists in the clinic, face-to-face invitation of the researcher, or responding to the general announcement in Shiraz University, Iran. The number of respondents was determined based on the Krejcie and Morgan's (1970) table of the sample size, as well as the sample size requirements for factor analysis (e.g., Wolf, Harrington, Clark, and Miller, 2013). For those who wanted to participate in research from home or workplace, a google form link was created and used. The participation was strictly voluntary.

4.5.2. Inclusion and Exclusion Criteria

Participants were all woman coming in to the Shiraz University Counseling and Psychotherapy Center (and its related organizations) for filling the below criteria:

Including those who

- Were in their 1 to 3 years of their first marriage: they have passed their first year of *commenced* marriage.
- Were 18 years and above.

Excluding

- The one who has been diagnosed with depression or severe psychiatric disease.
- The one who has used any type of antidepressants during the past three years.
- The one who has had arranged or obligatory marriage.
- The one who was expecting a baby or already had children.

The inclusion and exclusion criteria were set to prevent the potential factors related with occurrence of the depressive symptoms to confer with the predictors of this research. Factors such as post-natal depression, previous mental illness, the immediate impact of marriage, and the child/arranged marriage were taken into consideration.

There was no obligation for the participants to take part in this research and there is no conflict of interest between the psychotherapy center and the research goals. Additionally, the participants were selected from the women who have attended the health care center to form a mental health file as a requirement from the university or upon personal interest.

4.6. Method of Data Collection

The data was collected using paper and pen surveys or internet surveys upon the preferences of the participants. Participants responded to the surveys after meeting the researcher, being informed about the aims of the research and the anonymity of data. For those who filled the internet survey, a short video introduction was recorded and sent containing the same information.

To clarify, the internet survey contained exactly the items of paper and pen surveys which was designed online using a google forms platform. The surveys were anonymized, and only people who had access to the link were able to respond to the surveys.

4.6.1. Questionnaire Construction

In the present study, an anonymized demographic questionnaire was designed to gather personal information of the respondents (i.e., age, education, etc.). All other variables were measured using reliable and valid scales. According to the cultural and language difference, and for preventing the transformation effect, the researcher translated all questionnaires into colloquial Persian, checked the accuracy with two English language experts in the Shiraz University Department of Foreign Languages and compared the English form of questionnaires with the Persian format once after all scales were translated and approved. Three psychologists also assessed the consistency of the English and Persian versions. All questionnaires were submitted to the research board of counseling and psychotherapy center and have been approved to be used in the present study.

The Persian versions of two of the questionnaires have already been validated. For those, only reliability indices will be reported later in this chapter. To ensure the validity of other scales, Factor Analysis was performed which is briefly reported in chapter 5. Due to the high literacy level in Iran, and the context of study which was a university health care center, there was no need for the constant presence of researcher during data collection.

4.6.2. Instrumentation

1. *Basic Psychological Needs Satisfaction and Frustration Scale (BPNSFS)*

Within Self-determination Theory, both the satisfaction and frustration of the psychological needs for autonomy, competence and relatedness are considered critical for the prediction of individuals' growth and well-being and problem behavior and psychopathology (Ryan & Deci, 2000; Vansteenkiste & Ryan, 2013). To capture both the satisfaction and the frustration component, a new scale, that is, the Basic Psychological Need Satisfaction and Frustration Scale (Chen, Vansteenkiste, et al., 2015), was developed, which included a balanced combination of satisfaction and frustration items. The scale has been successfully used in some publications. Initially, the scale was formally validated in four culturally diverse samples located across the world, that is, Peru, China, Belgium, and the US (Chen, Vansteenkiste, et al., 2015). While need satisfaction was found to relate primarily to life satisfaction and vitality, need frustration yielded a positive relation with depressive symptoms". The Persian version of the mentioned scale was used. The BPNSFS consists of 24 items asking whether the three psychological needs were satisfied or not. The respondents report the answers on a 5-point Likert scale from 1 (Not true at all) to 5 (Completely true). Chen and colleagues (2015) validated the scale using Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) which both showed valid models with the satisfactory goodness of fit indices. For all six subscales, the measure of internal consistency was assessed to investigate the reliability. The Chronbach's alpha was more than 0.70 in all subscales. In Iran, the previous form of the scale which only measured satisfaction of the basic needs was evaluated and revealed a sound structure using CFA, as well as significant convergent and divergent validity. The

internal consistency of the measure in the Iranian population ranged from 0.83 to 0.91 for three subscales (Besharat and Ranjbar Kalagry, 2013).

2. Stressful Life Events Questionnaire (SLEQ)

This questionnaire was primarily developed for women, and it was more relevant to the context of this study comparing with other measures of life stressors. The questionnaire was adopted from the inventory of Ranked Life Events for Primiparous and Multiparous women (Barnette et al., 1983). This questionnaire is similar in structure and focuses on measures of stressful life events used in studies of nonpregnant adults (Bergman, Sarkar, et al., 2007).

It consists of 26 items describing life stressors for which participants are asked to report whether the event occurred and how it affected them in case of occurrence. Thus, the second factor describes the perceived intensity of each event: "*affected me a little*" or "*affected me a lot*". The scoring of the questionnaire results in two scores: the objective number and the perceived impact of the events experienced (Bergman et al., 2007).

3. General Purpose in Life Scale (GPLS)

Based on Emmon's rationale (2005) that goals are the manifestation of life purpose, the General Life Purpose Scale operationalized life purpose as attempts to pursue one's life goals. Byron and Miller-Perinn (2009) also included items focusing on self-knowledge, as they believe that the understanding of one's life goals relies on some degree of self-knowledge. Participants respond to each item using a Likert scale ranging from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*).
A complete total score can be calculated by summing scores for all 15 items. Scores ranging from 15 to 105 with higher scores indicating a greater general sense of life purpose. GPLS showed a valid structure tested by Exploratory Factor Analysis (EFA). A One-factor model was the only model that could be supported by data (Byron and Miller-Perinn, 2009). The Chronbach's alpha of 0.83 confirms the reliability of the measure.

4. Perceived Marital Self-Efficacy Scale

Self-efficacy referred to the individual's beliefs about a specific life domain (Bandura, 1977). Women's perceived marital self-efficacy was measured by 15 items assessing beliefs in their capabilities to communicate openly and confide in each other, share feelings, aspirations, and worries, provide each other with support, cope jointly with marital problems, and share common activities and social relations (Caprara, et al., 2004).
Participants can answer to each item on a Likert scale ranging from 1 (*Not very well at all*) to 7 (*Very well*). The study of Caprara and colleagues (2004) confirmed a unique factor structure with robust indices of validity. Chronbach's alpha was 0.94 for both men and women that showed excellent internal consistency.

5. Center for Epidemiologic Studies Depressive Symptoms Scale (CEDS-R-20)

The measure was developed to assess the current level of depressive symptoms in a general population (Radloff, 1977). The measure used in this research is the revised version (Eaton and

others, 2004) to assess symptoms of sadness, loss of interest, appetite, sleep, thinking and concentration, guilt, fatigue, movement, and suicidal ideation. It can be measured on a Likert scale of 0 to 4 which has been changed due to cultural considerations in the Persian form (1= rarely, never; 4=almost, always). The measure was developed in the National Institute of Mental Health, Maryland, USA. The scale has been widely used and validated in many populations and will provide a total score of the depressive symptoms (Smarr and Keefer, 2011). Four items (4, 8, 12, and 16) are worded in a positive direction to reduce the tendency toward responding bias; these items are reverse coded.
The Persian version of the CEDS-R was validated for Iranian students (Amiri, Mohammadi, and Forghani, 2008) which showed a strong convergent validity and a Chronbach's alpha of 0.92. The test-retest reliability was reported, as well (0.77).

Table 4 explains the conceptual definitions of the scales included in my study. It also depicts the associated survey items for each scale.

Table 4
Conceptual definitions of Scales and Associated Survey Items

Scale name and Instrument	Conceptual Definition	Subscales and Items
Basic Psychological Needs Satisfaction and Frustration Scale (*BPNSFS*)	The extent to which three psychological needs of autonomy, competence, and relatedness are satisfied or frustrated (Chen et al., 2015)	**1.** Autonomy Satisfaction (1, 7, 13, 19) **2.** Autonomy Frustration (2, 8, 14, 20) **3.** Competence Satisfaction (3, 9, 15, 21) **4.** Competence Frustration (4, 10, 16, 22) **5.** Relatedness Satisfaction (5, 11, 17, 23) **6.** Relatedness Frustration (6, 12, 18, 24) **7.** Total score of needs satisfaction **8.** Total score of needs frustration
Stressful Life Events Questionnaire (*SLEQ*)	The number of significant life events happened for women and the perceived degree of being affected by each event (Bergman et al., 2007)	**1.** the objective number **2.** the degree of perceived impact
General Life Goal Scale	The extent to which an individual perceives goal and has a sense of self-understanding (Byron and Miller-Perinn, 2009)	Uni Factor (a total score will be produced)
Marital Self-Efficacy Scale	The extent to which the women feel efficient in managing their relationship with their spouse and to maintain a satisfying	Uni factor (a total score will be produced)

	relationship (Caprara et al., 2004)	
Center for Epidemiologic Studies Depressive Symptoms Scale (*CES-DS-R*)	The frequency of the Depressive Symptoms experienced recently (Eaton and others, 2004)	Dysphoria, Anhedonia, appetite, sleep, concentration and thinking, guilt, fatigue, agitation, suicidal ideation will produce a total score

4.6.3. Reliability of the measures in the present study

The reliability of each survey was assessed by looking at the Chronbach's alpha, where scores closer to 1 indicate higher reliability. The BPNSF had a Chronbach's alpha of 0.78 for the satisfaction subscale and 0.78 for the frustration subscale. The marital self-efficacy scale had a Chronbach's alpha of 0.80. Stressful Life Events revealed an alpha coefficient of 0.72. The general life goals scale showed a Chronbach's alpha of 0.93. CES-DS-R showed a Chronbach's alpha of 0.92. All the reliability coefficients are highly acceptable.

Table 5
Reliability of Surveys

Variables	Number of Items	Chronbach's alpha
▪ Autonomy Satisfaction	4	0.76
▪ Autonomy Frustration	4	0.78
▪ Competence Satisfaction	4	0.80
▪ Competence Frustration	3	0.68
▪ Relatedness Satisfaction	4	0.76
▪ Relatedness Frustration	4	0.79
▪ Total score of needs satisfaction	12	0.87
▪ Total score of needs frustration	11	0.87
Stressful Life Events Questionnaire (*SLEQ*)	21	0.72
General Life Goal Scale	10	0.93
Marital Self-Efficacy Scale	10	0.80
Center for Epidemiologic Studies Depressive Symptoms Scale (*CES-DS-R*)	20	0.92

To check the contribution of each item to the factor reliability, the "Cronbach's alpha if one certain item was deleted" were also calculated. Among all survey items, only item 12 of the BPNSF was omitted according to a decrease in the reliability coefficient. Other excluded items are the ones seem irrelevant to the participants (i.e., questions regarding children and divorce).

4.7. Data Entry and Statistical Analyses

Data were manually entered into SPSS version 25 from the paper surveys. The data from internet surveys was an Excel output which was decoded by the researcher and exported to SPSS data set.

10 percent of the data rechecked and reentered to ensure the accuracy. To check the possible inappropriate analysis, the normal distribution of the data and the minimum and maximum of each value was checked, as well. All doubtful answers were set as missing. From the internet survey, there was no missing data according to the requirement of the e-form. Because the complexities of surveys (e.g., different types of the Likert scales), when participants missed an item, an alert asked that they fill it before moving on to the next survey. This resulted in no missing data for those who participated via internet. Participants who discontinued the surveys were excluded from the final dataset because it was assumed that they change their minds about attending.

4.7.1. Statistical Analyses

Using the Statistical Package for Social Sciences (SPSS) version 25, descriptive statistics were calculated to provide an overview of data, as well as the participants' demographic characteristics. As a prerequisite to performing regression, correlation coefficient (Pearson's r) was also calculated. AMOS (version 25) was used first for confirming the structural validity of basic psychological needs satisfaction and frustration scale and then, as a tool to perform path analysis and assess the hypothesized model. The significance of predictions was evaluated by the software based on the presumption of each statistical test.

All statistical analyses were performed by the researcher and with the supervision of the field advisor using SPSS version 25 for Windows (IBM Corp. Released 2013. IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp) and AMOS version 25 for Windows (Arbuckle, 2017).

4.8. Ethical Considerations

Ethical issues are essential in all types of research. The integrity, reliability, and validity of the research findings rely heavily on adherence to ethical principles (Koocher and Keith-Spiegel, 2016). In survey research, ethical principles are primarily centered on protecting the information of research participants (the respondents) and the principle of "do no harm".

Responding to surveys of the research was entirely voluntary, and the respondent is consenting to be part of the research project. The researcher ethically considered protection of the confidentiality and anonymity of the subjects in the present research, especially when the survey contains sensitive questions (i.e., life events). To fulfill the ethical requirements of Shiraz University Research Board, all surveys were anonymized. Ethical principles were followed to guarantee that all respondents are choosing to participate in the survey of their own free will. The researcher was committed that the participants were fully informed regarding the procedures of the research project. As an inherent part of data collection with human participants, I applied the ethical considerations to all aspects of my research. Although the research design was not experimental, there was human involvement in terms of visiting participants and asking questions regarding their personal lives. Despite there is no requirement of ethical approval for Masters' degree dissertation from the University of Gothenburg, According to Shiraz University regulations and upon the request of the field advisor, ethical approval was obtained from Shiraz University Counseling and Psychotherapy Center. The sensitive contents of the measures for depressive symptoms and

significant life stressors, adds to the significance of being ethically concerned. As a result, this section provides a summary of ethical considerations of the current research.

4.8.1. Informed Consent

As with any type of research ethical challenges may emerge, to carry out this research in accordance to the ethical guidelines of the university health care center, I ensured that all my colleagues and participants, either in the psychotherapy clinic or in the sub-organizations were well informed about the nature and necessity of this study. For those who have participated in online survey tool, I decided to record a short video introduction to the research. For others, after introducing myself and my affiliation to both University of Gothenburg and Shiraz University, I presented the questionnaires, informing the participants that there is no obligation to participate. I have also provided some basic information about the surveys, Likert scales, and the way the data will be used. The first page of the survey introduced the research and the conditions in which participants could select if they fit in with the inclusion and exclusion criteria. As the inclusion/exclusion criteria were sensitive in terms of the stigma of mental illness diagnosis or arranged and obligatory marriage, the participants could discontinue participation without explaining the reason.
At the end of the first page, once again a question was asked to ensure they are well informed.

4.8.2. Privacy and Data Protection

No identifying information linked participants to their surveys. On the introductory page, it was transparently mentioned that *no* contact information, ID, personal information, or student/staff number is required. There was no access to the IP of the respondents as the internet survey was designed using a google link. Once downloaded, the google form was deleted from the database, and a password-protected document was made to ensure the privacy of the participants even though they have taken the surveys anonymously. The data has been backed up on a protected external hard drive. Furthermore, no conversations were made note of, no images were taken, and no specific references or names of individuals were included, to avoid participants' identification and maintain privacy.

4.8.3. Harm

To the best of my knowledge, no harm came to the research participants in the process of this study as the data was protected, the participation was strictly voluntary, and according to the anonymity of the respondents. The subject matter being studied was not generally sensitive, and the commitment to data protection reduced its sensitivity. My contact information was available in the formats of an e-mail address and a Telegram (social media software ubiquitous in Iran) link for any questions or concerns.

4.8.4. Deception

Because of applying validated measures to this study, I did not have any in-depth or information seeking conversation or any form of interview with the participants. Therefore, aside from introducing the research procedure, and responding the potential questions, I never intentionally

asked participants any questions that would be deceptive, or that would purposefully limit their knowledge about the research.

4.9. Limitations

4.9.1. *Location*

Collecting data in a university health care center provides me with the opportunity of having enthusiastic participants, colleagues, and informants. This made the data collection a suitable process and prevented misunderstanding of the research and measures. On the other hand, it was a barrier to accessing respondents from lower socioeconomic status which reduces the diversity and affects the generalizability of findings.

4.9.2. Time

My first plan for this research was a mixed-methods design which could enrich the understanding about the construct, provide me with the opportunity of having in-depth interviews with informants and design a specific questionnaire for the depressive symptoms in marital context. According to the requirements from coordinating university, I had a limited time collecting data in Iran. As a result, I had to change my research design which is inherently limited to studying the lived experiences of individuals.

4.9.3. The Language of the measures

Using validated measures enables me to save time and to avoid a big part of qualitative and quantitative pre-study. In contrast, cultural differences between the contexts questionnaire were designed in, and Iran raises the concerns about respondents' understanding of items. To avoid the cultural effects, some questions of the measures have been omitted, or the wording has been changed.

Summary

In this chapter, the research methodology was described. The study used Structural Equation Modeling to examine factors related to depressive symptoms in the marital context. The research design was defined, the population and sampling procedures were identified, and the research question and the hypothesized model were proposed. The chapter consists of the instruments, data collection, and statistical analyses, as well as ethical and theoretical considerations. Finally, the limitations of the study were presented. Next, chapter 5 presents the findings of the research.

Chapter 5
Findings

Introduction

The purpose of this study was to test a self-determination model of depressive symptoms in the marital context. Structural Equation Modeling (SEM) was used to determine whether the relationship between variables proposed by the model was confirmed by empirical data. This chapter will present the information regarding the validity of the scales, descriptive statistics regarding the characteristics of the study's sample, as well as descriptive indices of the research variables. Also, the results of mediation analysis and SEM will be presented in the chapter.

5.1. Data Screening and Normality Testing

The validation feature set to the internet survey (e.g., force response option) facilitated the collection of a complete data set with no missing cases. In particular, a force response option was set for each of the survey items, which required participants to answer all of the items comprising the survey. If participants attempted to progress from one electronic page to the next without answering all of the items on that specific page, they would receive a warning message letting them know that they must answer all items before they can proceed. For each item that was left unresponded a red asterisk was highlighted allowing the participants to quickly scroll through the page and provide an answer to the items not answered. For the paper and pen questionnaires, the researcher was present at the time of response, and the participants were aware of that all questions should be answered. The paper surveys were checked after data collection was finished and those with missing values were excluded from the analysis.

Skewness for the variables ranged from -0.78 to 0.44 and the kurtosis ranged from -0.41 to 0.78. All values for skewness and kurtosis were within an acceptable range (±1.0 to ±2.0; George and Mallery, 2003). The only exception to the normality of data was the perceived stress score. As I have measured a risk related variable in the normal population, the distribution of perceived stress impact is highly skewed (-2.49) meaning that the participants have reported very few stressors and consequently, a low score of stress impact was calculated. The kurtosis of this variable was also high (5.92).

Also, to ensure that the variables assess distinct constructs the collinearities between variables have been checked. None of the variables seemed collinear with the other variables in this study.

5.2. Respondents' Demographic Characteristics

Total of 400 individuals attempted to complete the surveys. However, some of these cases were excluded from the data analysis because they chose to quit the surveys partway through. Thirty individuals quit the surveys without completing all the questions. This was interpreted as the

individuals revoking their consent to participate in the study, so their responses were deleted from the dataset. Three cases were deleted because they reported being married more than three years, which was an exclusionary criterion set up at the onset of the study. Additionally, the surveys automatically discontinued individuals who reported that they were under 18 or not married or have had one exclusion criteria based on the stressors questionnaire. Some duplicated responses were removed, as well. After these cases were removed from the dataset, 350 participants remained who could be included in the analysis. Demographic information about the sample is presented in tables 6 and 7.

Table 6
Respondents' Demographic Characteristics

Demographic Index	***Mean***	***Standard Deviation***	***Range***
Participants' Age	28.62	3.87	18-48
Spouses' Age	31.87	4.31	19-60
Months Married	27.34	8.78	12-36
Pre-Marriage period (months)	28.97	30.46	0-156

Table 7
Respondents' Educational Status Distribution

Educational Status	***Participants' (Percent)***	***Spouses' (Percent)***
Junior High-School Diploma	0.2	1.1
Senior High-School Diploma	3.5	12.3
Bachelor's Degree	49.8	46.0
Masters' Degree or Medical Doctorate	41.7	32.1
Ph.D. and Post-Doctoral Fellowship	4.8	8.5

5.3. The Validity of the Questionnaires

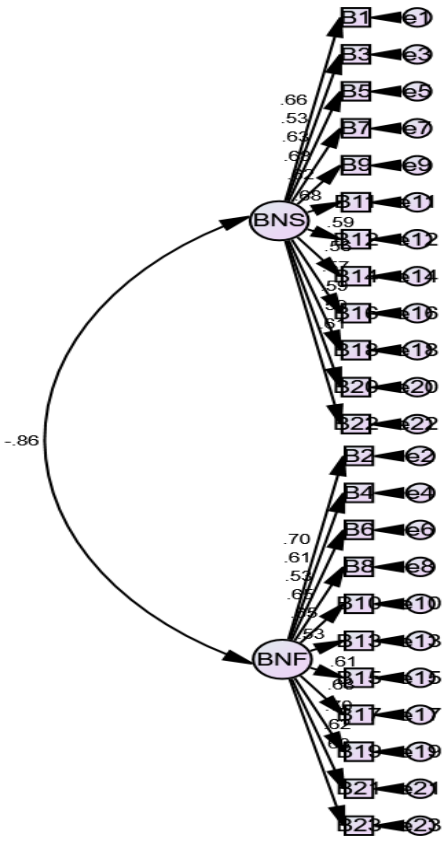
Before proceeding to the descriptive statistics, the results of the structural validity of the questionnaires will be presented. As the Persian version of most of the questionnaires was used in the present study for the first time, and they are culturally adjusted, it was required to perform either exploratory or confirmatory factor analysis to prove that the questionnaire measures the construct they claim to assess. Additionally, for Stressful Life Events Questionnaire, convergent validity was calculated.

5.3.1. Basic Psychological Needs Satisfaction and Frustration Scale (BPNSFS)

As there was a strong conceptual model for BPNSFS and some items were previously measured in Persian, confirmatory factor analysis using Amos software was performed for measuring the validity of the questionnaire. The CFA approved two factors of 'basic psychological needs satisfaction' and 'basic psychological needs frustration.' Figure 4 represents the factor loadings and the factor weight for each item.

According to the factor analysis, all factor weights were above 0.50 which is highly satisfying, and the only question omitted from the analysis was question 12 of the scale as it worsens the reliability of the measure.

Figure 4
CFA Model of BPNSFS



BNF=Basic Needs Frustration; BNS=Basic Needs Satisfaction

To determine the model fit, related indices were calculated which showed an acceptable structure of BPNSFS. Table 8 represents the fit indices related to the basic psychological needs satisfaction and frustration scale.

Table 8
Model Fit indices of BPNSFS

RMSEA	CFI	IFI	PNFI	NFI	AIC	χ^2
0.09	0.77	0.77	0.68	0.75	2174.707	2080.707

The goodness of fit indices for the proposed model revealed an acceptable model to be used in the research. Specifically, RMSEA which is a sensitive index showed an acceptable coefficient (the closer it is to zero, the better the model is).

5.3.2. Stressful Life Events Questionnaire (SLEQ)

To assess the structural validity of the SLEQ, a convergent validity method was applied. The linear correlation of the raw score of stress impact with the total score of depressive symptoms was calculated to prove the structure. The correlation coefficient equals to 0.11 which is significant and proves the validity of the questionnaire ($r=0.11$, $p<0.01$).

5.3.3. Marital Self-Efficacy Scale

The marital self-efficacy was a one-factor construct. To investigate the validity, a confirmatory factor analysis was run using SPSS version 25. The factor weights were all above 0.30, and no questions were omitted. Some questions were omitted because they seemed irrelevant to the sample characteristics. The results of CFA can be found in table 9.

Table 9
Confirmatory Factor Analysis of Marital Self-Efficacy Scale

Items: In your relationship with your wife/husband: How well can you:	***Factor score weights***
1. Set aside time to talk together about things that worry you.	0.47
2. Prevent disagreements from turning into angry exchanges.	0.53
3. Respect your spouse's views on matters even though you disagree with them.	0.58
4. Deal with problems together without blaming each other.	0.60
5. Accept criticism without feeling offended.	0.39
6. Get the support of your spouse when you have personal problems.	0.68
7. Make your spouse feel important and respected.	0.68
8. Get your spouse involved in important decisions about how to run the family.	0.68
9. Protect the privacy of your marital relationship.	0.59
10. Support your spouse in handling conflicts with parents.	0.65
Eigen Value = 3.64 Total Variance Explained = 36.46 %	

5.3.4. General Purpose in Life Questionnaire (GPLQ)

The GPLQ has shown a one-factor structure in the previous studies. As the questionnaire was new to the Iranian society and was culturally sensitive, an exploratory factor analysis (EFA) was performed to investigate the construct validity. EFA revealed one factor with no factor weight less than 0.40 for each item. Thus, no item was omitted from the questionnaire. Table 10 shows the factor weights, and total variance explained.

Table 10
Exploratory Factor Analysis of General Purpose in Life Questionnaire

ITEMS	*Factor score weights*
1. I have goals that I am working toward.	0.60
2. I am confident about who I am.	0.69
3. I am confident about where I am going in life.	0.82
4. I have a well-developed understanding of my gifts and talents.	0.72
5. I have no sense of direction in life.	0.75
6. I know how I should be using my gifts and talents.	0.77
7. I have a good sense of purpose in life.	0.84
8. I am unsure about what I should do with my life.	0.70
9. I make a difference in the lives of those around me.	0.47
10. My life is valuable and worthwhile.	0.78
11. I have a strong sense of the reasons for my living.	0.77
12. I have identified my mission in life.	0.80
13. My life does not serve any purpose.	0.63
14. I am making a contribution to society.	0.68
15. I am taking actions now that are moving toward my mission in life.	0.79
Eigen Value = 8.01 Total Variance Explained = 53.40 %	

5.3.5. Center for Epidemiologic Studies Depression Scale – Revised (CES-DS-R)

The CED-DS-R has been used in several studies in Iran. The construct validity of the measure was already approved. To ensure the validity of the structure in the present study, a CFA was performed using SPSS. The one-factor structured seemed cohesive and valid to be used in the study. No question was omitted, and all items revealed a factor weight above 0.30. The results are presented in table 11.

Table 11
Confirmatory Factor Analysis of CES-DS-R

items	***Factor score weights***
1.	0.51
2.	0.30
3.	0.75
4.	0.74
5.	0.37
6.	0.81
7.	0.68
8.	0.68
9.	0.76
10.	0.62
11.	0.55
12.	0.79
13.	0.55
14.	0.75
15.	0.54
16.	0.79
17.	0.52
18.	0.83
19.	0.60
20.	0.61
Eigen Value = 8.74 Total Variance Explained = 43.72 %	

5.4. Descriptive Statistics

Descriptive statistics for all measures are provided in Table Z. There was no missing data in the dataset. The participants reported an average score for the satisfaction of their basic psychological needs ($\bar{x}$*=27.14, SD=7.25*). Comparing to the satisfaction of basic psychological needs, they have reported a relatively high score of needs frustration ($\bar{x}$*=46.49, SD=7.25*). The perceived stress impact reported was quite low according to the low number of stressors experienced ($\bar{x}$*=0.28, SD=8.38*). The participants expressed a slightly high purposiveness in life ($\bar{x}$*=79.24, SD=16.19*) but these women felt slightly less efficient regarding their marriages as they have shown a moderate score on marital self-efficacy ($\bar{x}$*=51.49, SD=10.71*). Participants rated themselves as *slightly* to *moderately* experiencing depressive symptoms within the first two years of marriage ($\bar{x}$*=39.66, SD=12.19*). Table 12 represents the descriptive statistics related to each variable. Next, the prevalence of life stressors and the depressive symptoms will be presented.

Table 12
Descriptive Statistics of each Variable

Variable	*Scale Range*	*Mean*	*Standard Deviation*	*Skewness*	*Kurtosis*
Basic Psychological Needs Satisfaction	1-5	27.14	8.38	-0.60	0.76
Basic Psychological Needs Frustration	1-5	46.49	7.25	0.40	-0.14
Perceived Stress Impact	Raw Score	0.28	8.38	-2.44	5.92
Marital Self-Efficacy	1-7	51.49	10.71	-0.44	-0.41
General Purpose in Life	1-7	79.24	16.19	-0.78	0.23
Depressive Symptoms	1-4	39.66	12.19	0.78	0.03

Table 13 shows the prevalence of the depressive symptoms among Iranian women. In the current study, we have used the total score of the CES-DS-R to be able to assess the model fit. But to understand the general features of each symptom, the statistics are presented.

Table 13
Description of Depressive symptoms in Iranian Women

Symptoms	*Mean*	*Standard Deviation*
Dysphoria (Sadness)	5.44	1.98
Anhedonia (Loss of interest)	1.46	1.39
Appetite	4.45	1.62
Sleep Disturbances	5.64	2.14
Thinking and Concentration	3.79	1.62
Guilt and Worthlessness	3.99	1.61
Fatigue (Loss of Energy)	3.85	1.53
Agitation (psychomotor functioning)	3.90	1.46
Suicidal Ideation	4.60	1.73

Table 14 represents the number of stressful life events experienced in percent. Among all stressors, sever arguments with the partner was the most prevalent one (66%) followed by the financial stressors (i.e., decrease in family income 46.9%; severe financial problems 49.6%) which depicts the Iranian society stressors quite reasonably.

Table 14
Experienced Stressors and their prevalence in the Iranian Women

	Stressor	*Low Impact Frequency %*	*High Impact Frequency %*	*Total Frequency %*
1	You were admitted to the hospital.	7.1	4.6	11.7
2	You had a serious accident or illness.	7.9	7.9	15.8
3	Your partner had a serious accident or illness.	10.1	31.6	41.7
4	A friend/family member had a serious accident/illness.	2.6	7.2	9.8
5	You were in trouble with the law.	4.6	5.8	10.4
6	Your partner was in trouble with the law.	9.3	5.8	15.1
7	You were separated/divorced.	0	0	0
8	Your partner lost his job.	21.9	24.1	46
9	You experienced a significant drop in income.	25	21.9	46.9
10	You had a major financial problem.	22.6	27	49.6
11	Your car or house was burgled.	7.1	4.5	11.6
12	You became homeless.	3.5	4.3	7.8
13	You had a serious argument with your partner.	19	47	66
14	You had a serious argument with family or friends.	16.7	28.8	44.8
15	Your partner was physically cruel to you.	3	9.5	12.5
16	Your partner was emotionally cruel to you.	10.1	19.5	29.6
17	You were physically cruel to your partner.	8.1	8.3	16.4
18	You attempted suicide.	1.8	1.8	3.6
19	A friend or relative attempted suicide.	5.1	7	12.1
20	You suffered from mental illness.	5.7	4	9.7
21	A friend or relative suffered from mental illness.	19.9	14.4	34.3
22	A friend or relative died.	5.8	22.9	28.7
23	You had an extramarital sexual affair.	4.9	6.5	11.4
24	Your partner had an extramarital sexual affair.	2	5.1	7.1

5.4.1. Bivariate Correlations between Variables

To be able to assess the mediating role of the proposed variables, structural equation modeling with a path analytic approach was used. As a prerequisite of this method, all variables of the model must correlate pairwise, and all correlations should be significant. To examine the correlations between variable, Pearson's correlations analysis was performed in SPSS.

Table 15 presents zero-order correlations. Almost all of the variables were significantly correlated with each other, with correlations ranging from low (-0.07) to moderate (0.76). None of the variables were highly correlated, which suggests that each variable measured a distinct construct and there is no collinearity between them. The direction of the correlations is consistent with the hypothesized model. The correlations with life stressors are insignificant mainly because the stressors were not so prevalent in the normal population.

Table 15
Zero-order Correlations Among Key Study Variables

	(1)	(2)	(3)	(4)	(5)	(6)
(1) BPNS	1	-0.76**	-0.04	0.44**	0.76**	-0.69**
(2) BPNF		1	0.07*	-0.39**	-0.63**	0.78**
(3) SLS			1	-0.07*	-0.02	0.11**
(4) MSE				1	0.36**	-0.38**
(5) GPL					1	-0.66**
(6) DS						1

Notes. BPNS=Basic Psychological Needs Satisfaction; BPNF=Basic Psychological Needs Frustration; SLS=Significant Life Stressors; MSE=Marital Self-Efficacy; GPL=General Purpose in Life; DS=Depressive Symptoms. *$p < .05$; **$p < .01$.

5.5. A Review of the Research Questions

The study strived to response the following questions:

- Are basic psychological needs satisfaction and basic psychological needs frustration related to the depressive symptoms?
- Can depressive symptoms be predicted by the perceived impact of significant life stressors?
- Can the relationship between significant life stressors, basic psychological needs satisfaction and frustration, and the depressive symptoms be mediated by marital self-efficacy and general purpose in life?

5.6. Mediation Analysis

To respond to the research questions including the direct and indirect effects of exogenous variables on the dependent variables, the model was depicted in AMOS software version 25. The model fit indices were calculated, as well as regression weights and the direct and indirect causal effects. The modification indices were also calculated to correct the model in case of weak model fit.

5.6.1. Structural Equation Modeling: Model Fit

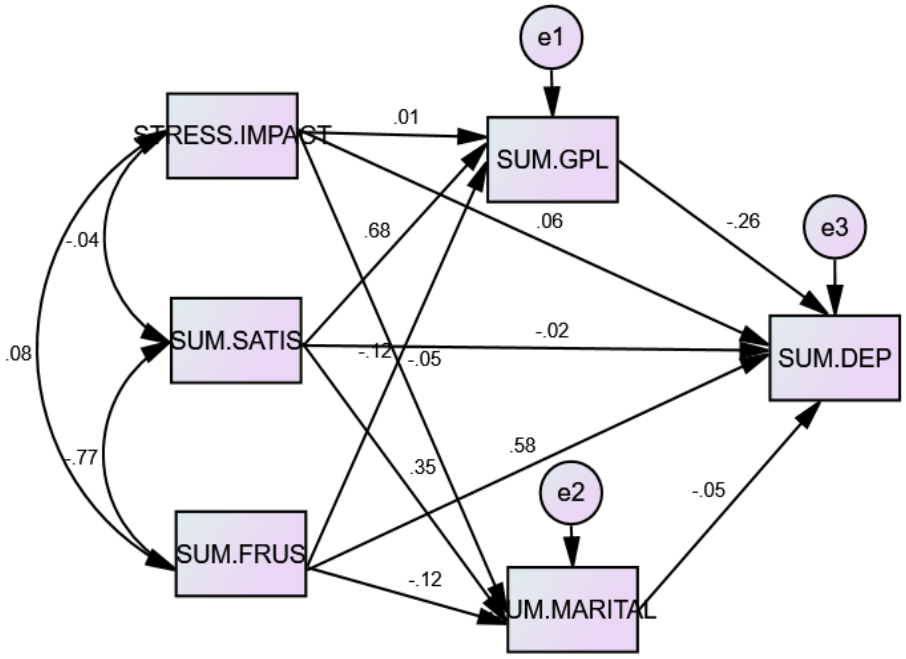
Structural Equation modeling with a maximum likelihood approach was performed. The path analytic approach assumes all variables as 'observed.' Thus, no latent variable analysis was run in the research model.

In Figure 5, I display the path model estimating causal effects of significant life stressor, basic psychological needs satisfaction, and basic psychological needs frustration on the mediators,

general purpose in life, and marital self-efficacy. The results of the paths from mediators to depression and the direct effects of exogenous variables on depression is depicted in the path model, as well.

Given that the combined surveys included nearly 95 items, the measurement model seemed challenging to be assessed in Amos. I chose to reduce the number of subscales of the independent variable, as well as depressive symptoms, to be able to analyze the model more efficiently. I have analyzed the structural model based on the subscales of each survey, as illustrated in Figure 1. This model was saturated in terms of model fit. Most of the fit indices calculated were saturated as they reach their maximum possible value (e.g., RMSEA=0.00; NFI=1; GFI=1). This means that the fit indices cannot be used statistically.

Figure 5
The Structural Relationships between Variables



Notes. Stress Impact=Perceived Impact of Significant Life Stressors; SUM.SATIS=total score of basic needs satisfaction; SUM.FRUS=total score of basic needs frustration; SUM.GPL=total score of general purpose in life; SUM.MARITAL=total score of marital self-efficacy; SUM.DEP= total score of depressive symptoms.

To reach the new fit indices, first I checked the significance of the coefficients. Non-significant paths were omitted, as well as coefficients less than 0.10, even though they were significant. Modification indices were also checked in the Amos output, but no further variances or covariances stood out to be modified.

5.6.2. The Revised Model

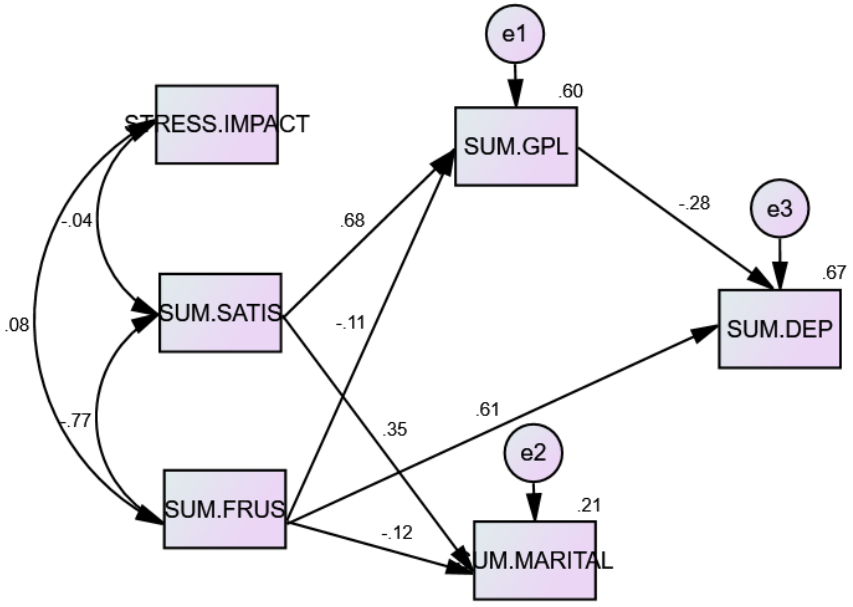
Before presenting the model, it is required to evaluate the model fit indices. Various indices can be calculated which represents different aspects of the model fit. Among all, the most popular ones were selected to be used in the current analysis. Chi-square for the original model was 18.34 (df=6) with a probability level of 0.005. This was not surprising given the large sample size of the study. Large sample size makes it unlikely that Chi-square will reach non-significance at the .05 level (Hooper, Coughlan, & Mullen, 2008). Additionally, the skewness of the data can prevent Chi-square from reaching non-significance.

The criteria applied to determine acceptable model fit were: Goodness of Fit Index (GFI $\geq$ 0.90), Normed Fit Index (NFI $\geq$ 0.95), Comparative Fit Index (CFI $\geq$ 0.95), and Root Mean Square Error of Approximation (RMSEA < 0.08). The Goodness of Fit Index (GFI), an absolute fit index which is sometimes substituted for Chi-square (Hooper et al., 2008; Mulaik, James, et al., 1989) was 0.99. "By looking at the variances and covariances accounted for by the model it [GFI] shows how closely the model comes to replicating the observed covariance matrix" (Hooper et al., 2008; Hu and Bentler, 1999). It is recommended that GFI reach .90 or larger to indicate goodness of model fit. Two incremental fit indices were examined. Normed Fit Index (NFI), which "assesses the model by comparing the Chi-square value of the model to the Chi-square of the null model" (Hooper et al., 2008) was 0.99. Comparative Fit Index (CFI), which "is a revised form of the NFI which takes into account sample size" (Hooper et al., 2008) was 0.99. Both NFI and CFI must reach 0.95 before a model is considered a good fit (Hooper et al., 2008; Schreiber, Nora, et al., 2006).

Additionally, another absolute fit index was examined. The Root Mean Square Error of Approximation (RMSEA), which "tells us how well the model, with unknown but optimally chosen parameter estimates, would fit the population's covariance matrix" (Hooper et al., 2008) was 0.05. This measure should be 0.08 or below in order to indicate good fit (Meyers, Gamst, & Guarino, 2006).

Results of SEM analyses for the general model revealed excellent fit indices. Other model fit indices were also calculated. Adjusted GFI (AGFI, cutoff criterion $\geq$ 0.90) equals to 0.97. Akaike Information Criterion (AIC) showed a value of 48.34. Additionally, RFI and IFI indices showed values of 0.98 and 0.99 which are both indicators of perfect model fit (Loehlin and Beaujean, 2016; Boomsma, Hoyle, and Panter, 2012; Schreiber, Nora, et al., 2006). Figure 6 depicts the final revised model of the research.

Figure 6
The Revised Model of the Research



Note. Stress Impact=Perceived Impact of Significant Life Stressors; SUM.SATIS=total score of basic needs satisfaction; SUM.FRUS=total score of basic needs frustration; SUM.GPL=total score of general purpose in life; SUM.MARITAL=total score of marital self-efficacy; SUM.DEP= total score of depressive symptoms.

5.6.3. Intercorrelations Among Variables

Table 16 shows the standardized coefficients in the model. In this model, the combination of basic psychological needs satisfaction, and basic psychological needs frustration accounted for 60% of the variance in General purpose in life. Also, the combination of the variances explained 21% variance of marital self-efficacy. Basic psychological needs satisfaction was the strongest predictor of general purpose in life (β =0.68; p<0.001). Additionally, it was the strongest predictor of marital self-efficacy, as well (β =0.35; p<0.001). Overall, the model accounted for 67% of the variance in depressive symptoms.

Basic psychological needs frustration (β =0.58; p<0.001) and general purpose in life (β =-0.26; p<0.001) were the strongest predictors of depressive symptoms. Basic psychological needs frustration was related to depressive symptoms both directly and indirectly through general purpose in life. Basic psychological needs satisfaction was only related indirectly through the general purpose in life. Table 17 shows the causal effects of the revised model. Basic psychological needs frustration's direct effect was β= 0.61 and its indirect effect was β =0.032. Thus, the frustration of basic psychological needs was positively correlated with the depressive symptoms, except when the general sense of purpose in life was high, in which case it was negatively correlated to depressive symptoms. Basic psychological needs satisfaction's direct effect on depressive symptoms was not significant, but it was indirectly correlated through general sense of purpose in life. In addition, marital self-efficacy was positively correlated with the satisfaction of basic psychological needs (β =0.35; p<0.001), and negatively correlated with the frustration of basic needs (β =-0.12; p<0.01); despite the path from marital satisfaction to depressive symptoms revealed a significant value, as the beta coefficient was low, we cannot assume it as it is mediating

the relationship between exogenous and endogenous variables. Concludingly, the model represents the crucial role of personal sense of purpose in reducing the effect of basic needs frustration. This means although marital self-efficacy is strongly correlated with the research variables, the general purpose in life plays a more important role in buffering depression.

Table 16
Raw and Standardized Coefficients for the Revised Full Model

Paths	**b**	**SE**	**β**	***p***
BPN satisfaction → General Purpose	1.51	0.077	0.68	0.001
BPN frustration → General Purpose	-0.22	0.067	-0.11	0.001
BPN satisfaction → Marital Self-Efficacy	0.52	0.071	0.35	0.001
BPN frustration → Marital Self-Efficacy	-0.15	0.062	-0.12	0.01
Stress Impact → Depressive Symptoms	1.05	0.358	0.05	0.003
BPN frustration → Depressive Symptoms	0.84	0.046	0.58	0.001
Marital Self-Efficacy → Depressive Symptoms	-0.05	0.025	-0.04	0.033
General Purpose → Depressive Symptoms	-0.19	0.023	-0.26	0.001

Note. BPN=Basic Psychological Needs

According to the table above, there are two paths that show significant coefficients. But as the beta coefficients are less than 0.10, I did not include them in the final revised model.

Table 17
Causal Effects of the Revised Model

Outcome	*Determinant*	*Causal Effects*		
		Direct	indirect	total
Marital Self-Efficacy	BPN frustration	0.35	--	0.35
R^2=0.21	BPN Satisfaction	-0.12	--	-0.12
General Purpose in Life	BPN frustration	0.68	--	0.68
R^2=0.60	BPN Satisfaction	-0.11	--	-0.11
Depressive Symptoms	BPN frustration	0.61	0.032	0.61
R^2=0.66	BPN Satisfaction	--	-0.19	-0.21
	Perceived Stress Impact	--	-0.001	0.05

Note. BPN=Basic Psychological Needs

5.6.4. Model Comparison

As I have studied a population in Middle Eastern culture, to include the demographic variables, I decided to compare the model in two groups of women who have known their partner before marriage more than six months with those who have had less than six months to get to know their spouse. To do so, the raw value of months before marriage was categorized as a dummy variable. Amos software was used to compare the coefficients, as well as model fit indices. To compare the models, insignificant paths were omitted as in the revised model. Figures 7 and 8 represent the final model in two groups.

Figure 7
The Revised Model for less than six months pre-marriage period

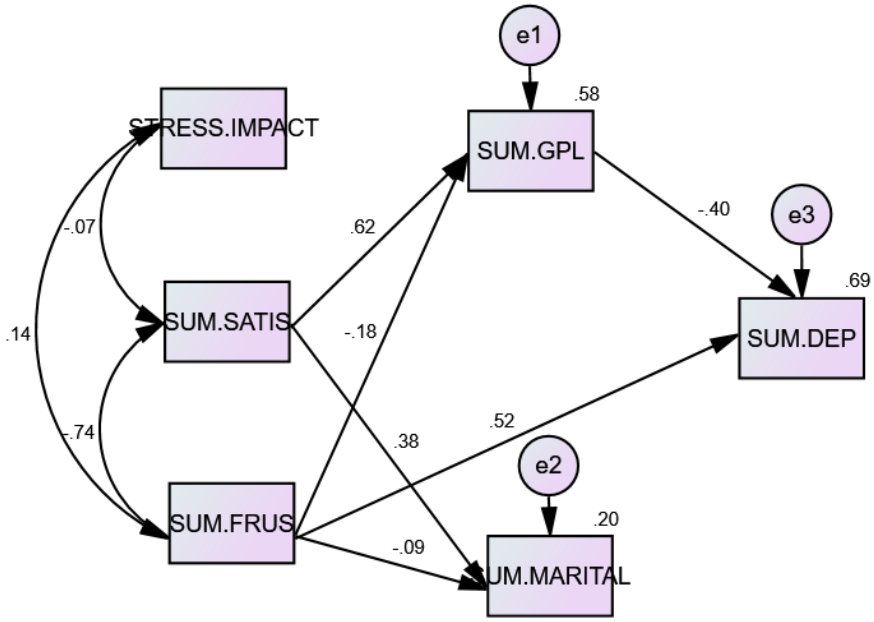
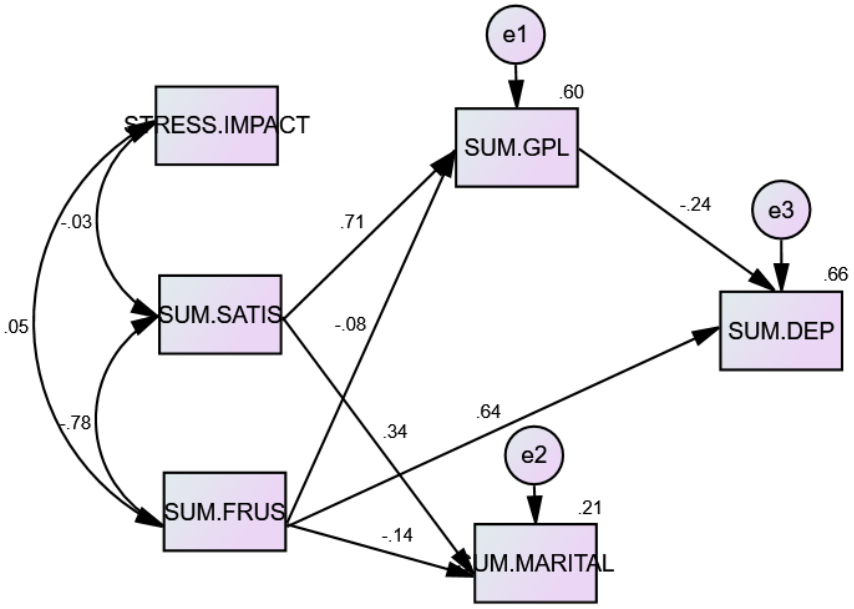


Figure 8
The Revised Model for more than six months pre-marriage period



As it is showed in both models, comparing to the general model, only slight changes occurred in different groups. The changes in the coefficients should be considered. As an example, in the group with more than six months pre-marriage period, the satisfaction of basic needs played a more

important role than the frustration (β =0.71). While in the group with less than six months pre-marriage period, both coefficients were strong and significant. On the other hand, those who had less time to get to know each other benefit more from their general sense of purpose in life (β= -0.40) while facing the depressive symptoms than the other group.

5.6.5. Model Fit Comparison

To compare the goodness-of-fit for each model, fit indices were calculated. Table BB represents the indices in both grouped models, as well as the general model. The indices are just slightly different mainly according to the sample population, as they are mostly sensitive to the sample size. All models revealed very good to excellent fit indices which means the hypothesized models fit in very well with the observations.

Table 18
Fit indices of the research models

Index	*General Model*	*Less than 6 months*	*More than 6 months*
GFI	0.99	0.98	0.99
AGFI	0.97	0.94	0.97
NFI	0.99	0.98	0.99
PNFI	0.39	0.39	0.39
χ^2	18.34; p<0.005	11.15; p<0.08	10.86; p<0.09
Adjusted χ^2	3.05	1.85	1.81
RMSEA	0.05	0.06	0.03
AIC	48.34	41.15	40.86
CFI	0.99	0.99	0.99
RFI	0.98	0.95	0.98
IFI	0.99	0.99	0.99

Summary

In this chapter, results of the current research were presented. First, characteristics of the sample were described, as well as descriptive statistics regarding key variables. Then information regarding the validity of the surveys was presented. Finally, the results of the SEM analysis were delineated, including the steps taken to revise the saturated model. Chapter 6 will discuss the results in the light of the research questions and existing literature.

Chapter 6
Discussions

6.1. Introduction

The overarching goal of this research was to contribute to the theoretical and methodological understanding of the depressive symptoms after marriage, more specifically by concentrating on the motivational, personal, and existential antecedents. I used Structural Equation Modeling (SEM) to examine the relationships between the Basic Psychological Needs Satisfaction and Frustration, Significant Life Stressors, Marital Self-Efficacy, General Purpose in life, and the Depressive Symptoms. In this chapter, I discuss the model/data fit, as well as the results of prior statistical analyses in the context of the guiding research question for this study.

This study was guided by the following question: *To what extent do the Basic psychological needs satisfaction and frustration and significant life stressors relate to the depressive symptoms? What are the factors mediating these relationships?* Part of the challenge of the current research was determining whether the relationships between variables provided a rational model that fits the empirical observations. The AMOS estimation procedure produced a reasonable solution for the initial hypothesized model. However, the model was saturated as almost all goodness-of-fit indices were close to the maximum possible value. To determine the statistical significance and substantive meaning of the full structural model, Schumacker and Lomax (2010) suggest that the following three criteria should be considered: (1) insignificant chi-square ($\chi 2$) values and an acceptable RMSEA value, (2) significant parameter estimates of the model, and (3) acceptable strength, directionality, and value range of the parameter estimates. To ensure all requirements of the model fitness were met, first insignificant paths were omitted from the model; then the modification indices were examined. As there were no statistical suggestions to modify the model, the final revised model was evaluated using Amos.

The final model revealed an excellent structure with the goodness-of-fit indices in statistically acceptable range. Concludingly, a total of six pathways were found to be significant. Comparing the revised model with the models for two demographic subgroups, revealed the same fit indices, as well as almost the same significant paths, with a slight difference in the group of women who had less time to be with their partner before marriage. The path from frustration to depressive symptoms revealed a much higher coefficient (β=0.52) comparing to the revised model and the group that had more time as the pre-marriage period. The acceptable goodness-of-fit in the causal models results from the low discrepancy between the observed values and the values expected under the model in question (Kline, 2016). In other words, a well-fitting model results in predicted values close to the observed data values (Kim, Sturman, and Kim, 2015).

In addition to the excellent model/data fit, the standardized pathways do provide useful information regarding the relationships between variables. First, basic psychological needs frustration was the strongest predictor of depressive symptoms (β=0.61). The coefficient was positive, which means as the frustration of basic psychological needs increases, the score for depression raises. This finding confirms the main presumption of this study that without basic psychological needs satisfied, the risk for psychopathology is increased. A handful of previous

studies have shown the same relationship. Chen, Vanteenkiste, and colleagues (2015) found a strong relationship between the frustration of basic needs and depressive symptoms. Similar to the current study, the satisfaction of basic needs did not show a significant relationship with 'ill-being' variables. Instead, it was highly correlated with the well-being outcomes. Other studies also showed a positive relationship between basic needs frustration and depressive symptoms. Brening and Soenens (2017) found that the frustration of parental basic psychological needs resulted in higher postnatal depressive symptoms. In another study, researchers found that the lack of autonomy in self-regulation is highly correlated with the depressive symptoms (Leow, Lynch, and Lee, 2016). Consistent with this study, other investigations also provided evidence that the frustration of basic needs is correlated with the depressive symptoms, while the satisfaction of needs is negatively correlated, or remained unrelated to depression (i.e., Plant and Sachs-Ericsson, 2004; Wei, Philip, Shaffer, Young, and Zakalik, 2005; Lu, Uysal, and Teo, 2011; Souesme, Martinent, and Ferrand, 2016).

Other direct effects were not significant in this model. Mainly, when the mediators have strong coefficients, the direct pathways in models may remain insignificant. One remarkable finding of this research was that compared to the frustration of basic psychological needs, significant life stressors did not reveal strong coefficient in predicting depression. I included significant stressors to the model to see if they can play a strong role in explaining the depressive symptoms. Compatible with my assumptions it does not show a strong relationship with depressive symptoms. Although it shows a positive correlation with depression, the correlation is low and can not be considered as an effective factor. This finding was inconsistent with the body of current literature on depressive symptoms as 'major theories of psychopathology over the last few years have included a strong rate for significant life events in the etiology of depression' (Harkness, 2008; also see: Oken, Chamine, and Wakeland, 2015; Keller, Neale, and Kendler, 2007; Mazure, Bruce, Maciejewski, and Jacobs, 2007; Robins, Block, and Peselow, 1990).

The only significant path was the one from significant life stressors to depressive symptoms as previously discussed. Although it was significant, the regression weight was so low that could not be considered as a reliable predictor. Referring to the correlation matrix, it is obvious that the correlations with significant stressors are either weak or insignificant. On the other hand, it is inconsistent with the current literature on depression and significant life stressors or the negative life events (Mazure et al., 2000; Keller et al., 2007). This is also incompatible with the current literature about self-efficacy (Lee, Kim, and Wachholtz, 2016; Burger and Samuel, 2017, D'Amico, Marano, Geraci, and Legge, 2013; Sebastian, 2013) and meaning/purpose in life (Devanand, Kim, Paykina, and Sackeim, 2002; Schaefer, Boylan, et al., 2013; Park and Baumeister, 2015). Even though inconsistent with the previous studies, a possible explanation might be the statistical fact that when there are robust exogenous variables in a model, they may prevent the other variables to reveal the impact. Based on the finding, I can suggest that the basic psychological needs fulfillment is vital for individuals' well-being to the extent that even with the presence of negative life events, the frustration of basic needs has a significant impact on the depressive symptoms.

Basic psychological needs satisfaction was the strongest predictor of general purpose in life ($\beta = 0.68$). Additionally, it was the strongest predictor of marital self-efficacy, as well ($\beta = 0.35$). This finding is also consistent with the current literature on meaning in life (Weinstein, Ryan, and Deci, 2012; Deci and Ryan, 2000) and marital self-efficacy (Reić Ercegovac and Bubić, 2016;

Gray, 2011). My first reflection on this finding seeks its roots in the grand theories of existential psychology. As Maslow (1943) mentioned with the basic needs of the human being satisfied, they can go beyond their material needs and think about who they are, how freely they can behave, and how they can be self-actualized. I offer another explanation about the relationship between sense of purpose in life and basic needs satisfaction. Conducting this research in a society with high spiritual values may result in meaning of life or sense of purpose to be one of the strongest buffers against depressive symptoms. The construct consists of several questions related to a sense of direction in life, being related to the universe, and a sense of self-knowledge. I think in the Middle Eastern societies like Iran, the main source for this sense of purpose in sort of spirituality. This finding is coherent with the literature on basic psychological needs and sense of meaning and purpose in life (i.e., Demirbaş-Celik and Keklik, 2018; Eakman, 2014; Hadden and Smith, 2017; Wu, Lei, and Ku, 2013). To discuss the relationship between basic psychological needs satisfaction and marital self-efficacy, I want to refer to the underlying components of the construct. When an individual feels autonomous in her or his life, as well as a holding a sense of competency and relatedness in the general domains of life, she or he can hold the beliefs about the relationships which consist of the efficient control, positive attitudes toward the collaboration with partner, and a belief of being able to manage a romantic relationship or marriage. This is consistent with the general literature about self-efficacy, as I could not find a study of relationship/marital self-efficacy in relation with basic psychological needs (Babenko and Oswald, 2018; Reić Ercegovac and Bubić, 2016; Garrin, 2014; Diseth, Danielsen, and Samdal, 2012; Sweet, Fortier, Strachan, and Blanchard, 2012; Gray, 2011). Marital self-efficacy was also negatively correlated with the frustration of basic psychological needs (β =-0.12) which is compatible with the concept each construct measures.

Analyzing the mediations, general purpose in life (β =-0.26) was the strongest predictors of depressive symptoms and mediated the relationship between both basic needs satisfaction and basic needs frustration and depressive symptoms. The reason why meaning of life can be predicted by basic psychological needs satisfaction and frustration was discussed previously. In this part, I offer an explanation about the relationship between depressive symptoms and general sense of purpose in life. I think one main reason that general purpose in life could play a strong mediation role in the relationship between variables is the 'buffering effect' of purpose and meaning of life (Krause, 2007). As mentioned by Steger (2012) The value of finding an overarching goal or mission to which one's life can be dedicated has led to the inclusion of purpose in the definition of psychological well-being suggested by Ryff and colleagues (i.e., Ryff, 1989; Ryff & Singer, 1998). Other prominent theories of well-being have similarly prioritized having goals and a sense of purpose (e.g., Emmons, 1986; Klinger, 1977). Thus, as a component of subjective well-being, the meaning of life can protect or decrease the pathological phenomena such as depressive symptoms. "Aside from the possibility that successful coping with psychological distress may facilitate enhanced meaning of life, there are conceptual reasons to expect that people with more meaning of life would report less psychological distress and lower psychopathology. Valuing one's life, having a sense of direction and purpose, and being able to comprehend one's experience seem contradictory to many manifestations of psychological distress." (Steger, 2012, p. 173). An ample of research supports the idea that meaning/purpose in life is inversely correlated with depressive symptoms Steger (2012) mentioned. According to a recent meta-analysis, the correlation with depression is −0.46 among older adults (Pinquart, 2002). Concludingly, in this area of research one of the most pervasive findings is that meaning in life is inversely related to depression (e.g., Shek, 1992; Lyon and Younger, 2001; Savolaine and Granello, 2002; Steger et al., 2006; Kleftaras and Psarra, 2012; Park and Jeong, 2016; Disabato, Kashdan, Short, and Jarden, 2017).

To discuss why general purpose in life was a stronger mediator comparing to the marital self-efficacy, one possible explanation is that in the collective cultures, like Iran, the variables that are personal usually has a weaker impact on individuals' wellness or illness. The sense of meaning and purpose is a socially desirable variable in the Iranian context, and this might affect the predictive power of variables, while marital self-efficacy is a more person-centered variable.

6.2. Discussing the Psychometric Findings

All psychometric properties of the variables were consistent with the previous studies regarding the reliability and validity of each measure. The women's significant life stressors questionnaire was negatively correlated with the depressive symptoms same as the original psychometric evaluations on the construct (Bergman, Sarkar, et al., 2007) which proves its structural validity. It also seemed reliable according to the Chronbach's alpha coefficient. Additionally, the structural validity and reliability of the marital self-efficacy scale were confirmed consistent with the original scale (Caprara et al., 2004). Similarly, the structural validity and internal consistency of center for epidemiologic studies depression scale were endorsed coherent with the original English format (e.g., Radloff, 1977). Additionally, the general purpose in life questionnaire revealed excellent reliability and a strong structural validity consistent with the findings of Byron and Miller-Perrin (2009).

The only difference in the structural validity was observed in the basic psychological needs satisfaction and frustration scale. Although it revealed very good internal consistency, the indices of goodness-of-fit were not all in an acceptable range using CFA. To confirm the validity, we can refer to the correlation matrix of this research where it is correlated with the key research variables accurately. Hence, the convergent and divergent validity is confirmed. A possible explanation for weak model fit by Nachtigall et al. (2003) suggested that well-fitting models are not always promising and may reveal a lack of predictive validity. Additionally, poor fit does not imply weak effects or mooted links between the variables. Besides, the factor weights were totally acceptable which is a confirmation of the validity of the scale.

Summary

Through the underlying theories defined as the ground for this study in the second chapter, this chapter provided a discussion of the findings. Departing from a structural equation framework for understanding the model fit and the relationship between variables, the discussions incorporated the consistency or inconsistency of the findings with the current body of literature; further, this chapter consists of a brief review of the psychometric findings.

Chapter 7
Conclusions

When I first started my university studies, and as a constant requirement of studying the life sciences, I was always concerned with the individual psychopathology, and the effects of abnormalities on each person. Over the course of my undergraduate studies, I took courses on developmental psychology, children and adults psychopathology, and social psychology, but a major turning point of my life was when I became acquainted with the systemic approach to study human behavior. However, it was not until I decided to study in the field of families and children. As a result, I started my Master's studies in Social Work with Families and Children, where I gained a more profound knowledge on developmental psychopathology, and systemic approaches in social work practice.

The multidisciplinary nature of studying social work enabled me to think both more critically and in a creative way about the various aspects of human behavior. As a clinical psychologist who was always concerned with the individual factors, I got to know the many underlying components of human behavior and some sociopolitical determinants of human well-being. Studying the concepts of developmental psychopathology, critically approaching the medical dominance in health care, and thinking of my own experiences in working with people, enthuse me to follow my passion in understanding a new, and maybe, context-specific construct: "post-marriage depressive symptoms."

I worked determinedly to design research that is controlled, but not artificial. I decided to select my participants from a normal population, and I excluded the clinical population from my research and analyses to be able to understand the phenomenon better and without bias. As a point of departure, I first faced a gap between the real life and psychology, social work, and psychiatry literature. When I first searched the term 'post-marriage depression,' the social media results and the public blogs mentioned a situation in which women experienced loss of joy and low mood after they got married. Checking the references, databases, and the previous scholarship about depression provided me with a few scholarly articles. I realized that underestimating the potential pathological effects of 'union formation' may result in developing psychopathology in a group that should be generally healthy.

Studying both clinical psychology and social work stimulated me to think beyond the medical and psychological definitions of health. Applying a public health framework, I assume health as not only absence of 'disease and infirmity,' rather, I recognize health as 'complete physical, mental, and social well-being' (WHO, 1948). This approach evokes me to contribute to the knowledge about depression as a dominant public health problem. With the guidance from my supervisors, I designed this study to represent my interests, and to contribute to the gap in the field of marriage psychopathology by conducting a structural equation modeling analysis on the relationship between the basic psychological needs satisfaction and frustration and the depressive symptoms. I decided to include women's significant life stressors in the equation to see if the occurrence of depressive symptoms can be explained by the stressors, rather than the satisfaction, and frustration of basic psychological needs.

I included two mediators to the model: a marriage-related construct (marital self-efficacy), and an individual factor of general purpose in life to compare their roles in the model. Both mediators were positive constructs selected to examine the buffering factors against depressive symptoms rather than focusing only on the pathological factors. This study is not only crucial for reducing the gap in the literature and recognizing the potentially threatening and protecting factors in the marital context but serves to enlighten the covert side of getting married. This implies the possible consequences not only for Iranian women; Thus it should motivate further exploration of the topic.

The present study aimed to investigate the following questions:

- Are basic psychological needs satisfaction and basic psychological needs frustration related to the depressive symptoms?
- Can depressive symptoms be predicted by the perceived impact of significant life stressors?
- Can the relationship between significant life stressors, basic psychological needs satisfaction and frustration, and the depressive symptoms be mediated by marital self-efficacy and general purpose in life?

To explore these questions, I adopted a quantitative research design and developed a causal model consists of data from five different surveys and one demographic questionnaire (as described in the fourth chapter). I analyzed the data that I had collected using a path analytical approach based on a maximum likelihood framework (Hayes, 2017). This strategy provides me with the results consisting of the causal relationships between the variables, the goodness-of-fit indices which show the consistency between the hypothetical model and the empirical data, as well as the variances explained by each variable. I also used the descriptive statistics to report the demographic characteristics of the population, likewise the distribution of each variable in the population which enabled a further profound analysis of the findings in the sixth chapter.

In the sixth chapter, I concentrated on the relevance of self-determination theory, as the cornerstone of basic psychological needs, to the depressive symptoms. I also recognized the self-determination theory as a unifying theory of both growth and vulnerability (Vansteenkiste and Ryan, 2013). This means the theory can provide an explanation of how motivational factors can contribute to the relationship-related psychopathology (La Guardia, and Patrick, 2008). In summary, and to respond to the research questions, the results of this study, as discussed throughout chapters five and six, are presented below:

My overall findings suggest that the depressive symptoms are prevalent in the newlywed Iranian women and of course, it is worth considering as both health and social issue. The Comparison of the mean of depressive symptoms scale in this study with the other studies of the Iranian population reveals a meaningful difference (i.e., Amiri, Mohammadi, and Forghani, 2011). As mentioned in the previous chapters, the rates of divorce within the first three years of marriage is around 50 percent in Iran. This might be an intriguing result for the health professionals, social workers, and above all the policymakers to seek the roots of such stunning statistics.

Additionally, I found a strong relationship between the frustration of basic psychological needs and depressive symptoms. Both direct and indirect paths from basic psychological needs

frustration to the depressive symptoms were significant; Also, the regression weights were quite high. This means even after marriage, the basic psychological needs of autonomy, competence, and relatedness are not adequately satisfied, and health professionals must consider this as a risk factor for women's depression. On another hand, the satisfaction of basic needs showed a fully mediated relationship with the depressive symptoms through the general purpose in life while its direct relationship with depressive symptoms was insignificant, but it was a strong predictor for both mediators. In general, consistent with the hypotheses of this research, basic psychological needs satisfaction is a negative indicator of depressive symptoms, and basic psychological needs frustration can be considered as a strong positive indicator of depressive symptoms in women. The results of the model presented in this dissertation were consistent with the theoretical model of Vanteenkiste and Ryan (2013) presented in the third chapter.

Notably, despite the fact that the relationship between women's significant life stressors and depressive symptoms was significant, the regression weight was not sufficient to be considered as a cause for depressive symptoms in the current research.

Analyzing the mediators, general sense of purpose in life played a very significant role in buffering the depressive symptoms which means an individual's meaning of life, is a more important protecting factor of depressive symptoms, comparing to the marital self-efficacy which is the belief that a person holds regarding the relationship with her spouse. On the other hand, although the marital self-efficacy does not mediate the relationship between variables, it revealed a strong correlation with the satisfaction of basic psychological needs meaning that the more basic needs are satisfied, the better image individuals hold regarding their ability to manage marital relationships. Also, my findings suggest that basic psychological needs satisfaction are strong predictors of the general purpose in life. This is consistent with some grand theories such as Maslow's self-actualization theory (Koltko-Rivera, 2006) that states with the basic human needs satisfied, the individuals can reflect upon more advanced needs like their meaning of lives, purpose, and being actualized.

Moreover, this research showed a slight, but significant difference between the women who had sufficient time before getting married to be related to their partners and those who did not have the time to get to know their partners. In the first group (+6 months) the frustration of needs path to general purpose in life was insignificant, and instead, the path from needs satisfaction to general purpose in life showed a very strong coefficient. This signifies the importance of previous knowledge about the partner. In the second group (-6 months) the path from basic needs frustration to depressive symptoms showed a higher coefficient comparing to the other groups. The path from basic needs frustration to the general purpose in life also revealed a higher coefficient in this group.

Finally, the research suggests high goodness-of-fit indices for the hypothesized model which approves the rationale of the causal relationships proposed in this study statistically.

7.1. Strengths and Limitations

7.1.1. Limitations

I have extensively described the limitations of this research in the fourth chapter. As a summary, the limitations are mostly related to the self-report instruments that prevent the in-depth study of each variable, also going beyond numbers. “This may have resulted in participants responding in socially desirable ways that might not accurately reflect their true behavior. However, the nature of the variables made it necessary to utilize the self-report method” (Johnson, 2015). Time constraint had me change the research design from mixed-methods research to a quantitative design. I would add some in-depth interviews with the women experiencing post-marriage depressive symptoms if I had more time to collect my data. Also, the data collection in the university health care center prevented me from accessing respondents from lower socioeconomic status which reduces the diversity of the respondents and will affect the generalizability of the findings. The last limitation was the language of the measures which might affect the validity of scales, as most of them were used in this research for the first time.

7.1.2. Strengths

This study and the dataset on which it was based had several methodological strengths. First, high rate of participation provided me with a rich database that averts the results to be affected by the small sample size. Using an updated measure of basic psychological needs satisfaction and frustration (2015 edition) helped the participants to respond the survey quite easily as the questions made sense for them. Applying a multiple mediator model strengthened the model as usually one single mediation models simplify the kind of phenomena that researchers study (Hayes, 2018). In addition, the use of structural equation modeling is unique in the field of post-marriage depressive symptoms. This technique allows for multiple measures of basic psychological needs satisfaction and frustration, significant life stressors, marital self-efficacy, general purpose in life, and depressive symptoms to be utilized in one model that tests their interrelations. The associations of the variables and their potential mechanisms are complex and structural equation modeling is especially advantageous for exploring that complexity (Cheadle, 2016).

7.2. Implications and Recommendations

There are some future directions that this work also indicates. My research has important implications for better understand factors that influence the depressive symptoms within the first three years of marriage in women. As marriage researchers, social workers, and psychologists better understand the symptoms of depression after marriage, they can help their clients more efficiently to prevent the symptoms turn into a clinical stage. This will help social workers as the first cycle of mental health professionals to serve the people they come in contact with more warily. It also has significant implications for professional practice and future research in the field. The following sections will highlight the implications. I will describe the implications of the study for health care professions, with a concentration on social work.

The dissertation is overarching evidence to the fact that despite the ample of research on the depressive symptoms, depression is still a complex construct and to understand its antecedents,

we need to consider it in various contexts. To determine the triggers for depressive symptoms, more in-depth analyses are required. Also, flexibility in using the diagnostic criteria and the etiologies mentioned in the major psychopathology handbooks is recommended. Neither DSM 5 nor ICD 10 mentioned positive stressors like marriage as a trigger for the onset of depressive symptoms.

As it was mentioned in chapter two, the possible risk factors for depression have been explored in a handful of previous studies, but this research suggests a motivational framework for scrutinizing the depressive symptoms. It was previously mentioned that basic psychological needs satisfaction and frustration are predictors of depression (Chen, Vanteenkiste, et al., 2015), but no research addressed the relationship in a marital context. As mentioned by Lamb, Lee, and DeMaris (2003) a negative effect of entry into marriage on depression can be observed.

I think the gap between theories of depression, psychological textbooks, and what we can observe in the clinical setting, is where the multidisciplinary field of social work can play a significant role in. Social workers are mostly the first group of health professionals who meet the individuals in various situations. The nature of working in this field is based on building relationships, understanding the individuals' lived experiences, and helping them to build strengths (winter, 2011). They are not clung to the all-or-none psychiatric norms, and they have a profound understanding of the macro, meso, and micro level factors that might affect an individual's health and well-being. The critical approach of social work (Fraser and Matthews, 2007) enables us to talk about this major health issue with the clients, policymakers, and other health professionals that might lead to building up a new discourse on depression. As mentioned by Fraser and Matthews (2007), the term 'critical' is used here to "refer to open-minded, reflective approaches that take account of different perspectives, experiences and, assumptions" (p. 8). Thus, I think looking at depression as a major *public* health problem, and not only a personal psychopathology is where we can impact the discourse, and improve the well-being of the society, like social workers.

7.2.1. Future Directions for Research

The present study has implications for future research. First, the literature review revealed gaps in the knowledge that we have about depressive symptoms in newlywed women. There is disagreement about whether the depressive symptoms can occur soon after getting married. Lamb, Lee, and DeMars (2003) suggested a correlation between union formation and depression. Other studies also provided evidence of the depression in the marital context (Joiner and Timmons, 2009; Burns, Sayers, and Moras, 1994). However, undoubtedly more research is required to formulate 'post-marriage depressive symptoms,' and much more epidemiological research is required to prove the prevalence in different populations.

By the increasing rates of divorce in Iran, there is an immediate need to study the underpinning psychosocial factors related to marriage. One crucial constraint for me while working on the findings was the lack of research on the topic. There are very little comparable studies on depressive symptoms after marriage. The quantitative studies are few, but the qualitative research on post-marriage depression is almost a unique area to be investigated (i.e., Ratcliff, 2015). Nonetheless, I hope that this study has provided the ground for further inquiry on this topic. I recommend the following topics to be investigated regarding post-marriage depressive symptoms.

- Further quantitative examination of the antecedents and outcomes of post-marriage depressive symptoms can add to the understanding of the circumstances and potential pathological effects of getting married. This can include comparisons with the clinical populations or longitudinal studies on the psychopathological effects of union formation.

- Additionally, it is also important to replicate my study with different ethnic and cultural groups. All participants were residing in Iran at the time of the survey. Because of this, it is unclear how my model would generalize to racial and ethnic minorities or populations outside Iran. Future research should be intentional about recruiting individuals from a variety of ethnic and cultural backgrounds, as well as Iranian migrants to see how these results generalize or do not generalize.

- Research is needed to determine how marital self-efficacy can be increased via therapeutic interventions to play a significant role in preventing depression. In particular, I wonder if a strengths-based approach, whereby couples are encouraged to reflect on what they are already doing right in their marriage and times they have been successful in the relationship, could be useful. Helping couples see their strengths and find proof of their skills in their past behavior might increase their marital/relationship self-efficacy (Johnson, 2015).

- I would suggest the development of a specific quantitative measure or a structured interview for post-marriage depressive symptoms. Of course, to evaluate the measure, several psychometric evaluations are required.

- Further inquiry might include some qualitative studies on the nature of depression in women (e.g., Wakefield and Demazeux, 2016). It is also crucial to figure out women's interpretation about getting depressed. Also, it is essential to investigate the lived experiences of the depressed women and to be the voice of those who have experienced the depressive symptoms after getting married.

- In this research, one factor negatively related to the depressive symptoms was general sense of purpose in life in which is an existential construct. It might be informative to investigate in both qualitative and quantitative sense the effects of existential constructs on health and psychopathology. Specifically, I suggest a qualitative study on the meaning of life in a clinically diagnosed population as 'depressed.'

7.2.2. Future Directions for Practice

Despite decades of research, the literature continues to be divided over whether marriage has pathological effects or not. As a mental health practitioner, I can understand the allure of wanting a cut and dry answer to this question. It would be convenient to introduce the potential pathological aspects of marriage to the clients, as well as informing them about some fast relieves. However, this is a very reductionist way to look at marriage. In reality, each union formed as 'family' is unique and what is a risk factor for one couple might be irrelevant to the other. My research extends the conversation beyond the dichotomy of being positive or negative about marriage, especially in

the Iranian context. Instead of conceptualizing marriage as universally good or bad, it reveals that there are some potential pathological effects, but besides, it introduces the possible buffering factors such as basic needs satisfaction, sense of purpose in life, and the marital self-efficacy.

The results suggest a need to conceptualize statistically and clinically what is happening after getting married. It might be the expectations that are not met, or the height of marital expectations might be high as mentioned by Johnson (2015), or it might be the depression like a reaction to getting married as a significant, but positive life stressor. Some things that mental health professionals might consider in light of this research include:

1. Take the time to understand the depressive symptoms of the women you work with, without judging the symptoms as being clinically significant at first glance. Ensure the client's previous psychopathology history does not include depression, and if the only significant event of the client was depression, we might inform them about the phenomenon.
2. Initiate dialogue with couples about their basic psychological needs and the importance of fulfilling them. Also, it is important to mention that the beliefs they hold about their marriage may affect what they experience as 'loss of joy' or 'low mood.'
3. Help the women you work with identify their personal and relational strengths and formulate their own plan for using their resources. One important strength might be a sense of purpose and meaning in their lives which can be fostered or stimulated through intervention.

Also, it seems vital for social workers to apply a prevention/public health approach to their practice. Through the findings of the current study, it was obvious that the lacking awareness and prevention in Iranian society may be resulting in the prevalence of depressive symptoms. Also, it is vital to look at these symptoms using an emancipatory social work approach, as the women have reported the lack of autonomy, competence, and relatedness in which forms the foundation of their agency. This approach is fruitful specifically for the workers in the developing countries.

Summary

The chapter consists of a general explanation of the findings along with a review of the research questions, strengths, and the weaknesses of the present research. Followed by the implications for both future research and practice.

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Appendices

Appendix 1: The Demographic Questionnaire (Persian)

سلام از نام‌های زیبای خدا است

پرسشنامه‌های حاضر برای استفاده در پژوهشی دربارهٔ سلامت زنان بعد از ازدواج در اختیار شما قرار گرفته است. لطفاً به همهٔ سؤالات پاسخ دهید. هیچ جواب درست یا غلطی وجود ندارد؛ نظر شما هرچه باشد، ارزشمند است. نوشتن نام و دیگر اطلاعات فردی *لازم نیست!* مطمئن باشید پاسخ‌های شما محرمانه خواهد ماند.

برای شرکت در این پژوهش باید شرایط زیر را داشته باشید:

۱. **یک تا سه سال** از ازدواجتان گذشته باشد (به جز دوران عقد و نامزدی)؛
۲. **بالای هیجده سال** داشته باشید؛
۳. با تجویز پزشک و برای درمان بیماری، در پنج سال گذشته از داروهای اعصاب و روان **استفاده نکرده باشید**؛
۴. به اجبار ازدواج **نکرده** باشید؛
۵. باردار *نبوده* و فرزند *نداشته* باشید.

در صورتی که معیارهای بالا را دارید، لطفاً به پرسش‌های زیر و بقیهٔ پرسش‌نامه‌ها پاسخ دهید و اگر فقط یکی از معیارهای بالا را ندارید، لطفاً همین حالا پرسش‌نامه را بازگردانید:

- سن:
- شغل:

میزان تحصیلات: زیر دیپلم ◌ دیپلم◌ کارشناسی◌ کارشناسی ارشد یا دکترای عمومی◌ دکتری تخصصی◌

- طول مدت ازدواج:
- سن همسر:

میزان تحصیلات همسر: زیر دیپلم ◌ دیپلم◌ کارشناسی◌ کارشناسی ارشد یا دکترای عمومی◌ دکتری تخصصی◌

- طول دورهٔ آشنایی شما پیش از ازدواج چه قدر بوده است؟
- برای پاسخ‌گویی به پرسنامه‌های بعدی لطفاً دورهٔ ازدواج خود (سال یک تا سه) را در نظر بگیرید و به پرسش‌ها پاسخ دهید. مثلاً اگر دربارهٔ روابط سؤالی می‌خوانید، در نظر بگیرید به عنوان یک خانم متأهل چه احساسی به سؤال دارید و سپس به سؤال پاسخ دهید.

با تکمیل این پرسش‌نامه‌ها شما موافقت و تمایل کامل خود را برای مشارکت در یک پژوهش علمی که به عنوان رسالهٔ کارشناسی ارشد انجام می‌شود، اعلام می‌دارید.

Appendix 2: BPNSFS (Persian)

با توجه به جدول راهنما دور عددی که شما را بهتر توصیف می‌کند، دایره‌ای رسم کنید.

۱= اصلاً درست نیست	۲= درست نیست	۳= نمی‌دانم	۴= درست است	۵=کاملاً درست است

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	سؤالات					
۱	در کارهایی که به عهده می‌گیرم، احساس آزادی و قدرت انتخاب دارم.	۱	۲	۳	۴	۵
۲	در بیش‌تر کارهایی که انجام می‌دهم، احساس می‌کنم که «مجبورم» انجامشان دهم.	۱	۲	۳	۴	۵
۳	احساس می‌کنم آدم‌هایی که مراقبشان هستم، آن‌ها هم به من توجه می‌کنند و مراقبم هستند.	۱	۲	۳	۴	۵
۴	حس می‌کنم از گروهی که دوست دارم به آن متعلق باشم، کنار گذاشته شده‌ام.	۱	۲	۳	۴	۵
۵	از این که می‌توانم کارها را به خوبی انجام دهم، احساس اعتماد به نفس می‌کنم.	۱	۲	۳	۴	۵
۶	به شدت شک دارم که به خوبی از پس انجام کارها بر می‌آیم یا نه.	۱	۲	۳	۴	۵
۷	احساس می‌کنم تصمیم‌هایم به خوبی نشان‌دهندهٔ همان چیزهایی هستند که واقعاً «می‌خواهم».	۱	۲	۳	۴	۵
۸	حس می‌کنم مجبور به انجام کارهایی هستم که اگر دست خودم بود، اصلاً انجامشان نمی‌دادم.	۱	۲	۳	۴	۵
۹	با افرادی که مراقبشان هستم و آن‌ها هم حواسشان به من هست، احساس پیوند می‌کنم.	۱	۲	۳	۴	۵
۱۰	احساس می‌کنم آدم‌های مهم زندگیم با من سرد هستند و از من فاصله گرفته‌اند.	۱	۲	۳	۴	۵
۱۱	در کارهایی که انجام می‌دهم، توانا هستم.	۱	۲	۳	۴	۵
۱۲	دربارهٔ بخش عمده‌ای از عملکردهایم در زندگی احساس ناامیدی می‌کنم.	۱	۲	۳	۴	۵
۱۳	احساس از روی انتخاب‌هایم می‌شود فهمید که «من واقعاً چه کسی هستم».	۱	۲	۳	۴	۵
۱۴	احساس می‌کنم برای انجام کارهای خیلی زیادی زیر فشارم.	۱	۲	۳	۴	۵
۱۵	نسبت به آدم‌های دیگری که برایم مهم هستند، احساس صمیمیت و نزدیکی می‌کنم.	۱	۲	۳	۴	۵
۱۶	این برداشت را دارم که آدم‌هایی که با آن‌ها وقت می‌گذرانم، مرا دوست ندارند.	۱	۲	۳	۴	۵
۱۷	شایستگی و توانایی کافی برای رسیدن به اهدافم دارم.	۱	۲	۳	۴	۵
۱۸	نسبت به توانمندی‌هایم احساس ناامنی می‌کنم.	۱	۲	۳	۴	۵
۱۹	احساس می‌کنم واقعاً کارهایی را در زندگی انجام داده‌ام که به آن‌ها علاقه داشته‌ام.	۱	۲	۳	۴	۵
۲۰	فعالیت‌های روزانهٔ من مثل زنجیره‌ای از بایدها و اجبارها است.	۱	۲	۳	۴	۵
۲۱	نسبت به افرادی که با آن‌ها وقت می‌گذرانم، احساس گرمی می‌کنم.	۱	۲	۳	۴	۵
۲۲	احساس می‌کنم روابطی که در زندگی تجربه می‌کنم، صرفاً رابطه‌هایی سطح هستند.	۱	۲	۳	۴	۵
۲۳	احساس می‌کنم می‌توانم کارهای سخت را با موفقیت تمام کنم.	۱	۲	۳	۴	۵
۲۴	به دلیل اشتباهاتی که کرده‌ام، احساس شکست می‌کنم.	۱	۲	۳	۴	۵

Appendix 3: BPNSFS (English)

1) General Measure – English Version

Below, we are going to ask about your actual experiences of certain feelings in your life. Please read each of the following items carefully. You can choose from 1 to 5 to indicate the degree to which the statement is true for you at this point in your life.

1	2	3	4	5
Not True at all				Completely True

1.	I feel a sense of choice and freedom in the things I undertake	1	2	3	4	5
2.	Most of the things I do feel like "I have to"	1	2	3	4	5
3.	I feel that the people I care about also care about me	1	2	3	4	5
4.	I feel excluded from the group I want to belong to	1	2	3	4	5
5.	I feel confident that I can do things well	1	2	3	4	5
6.	I have serious doubts about whether I can do things well	1	2	3	4	5
7.	I feel that my decisions reflect what I really want	1	2	3	4	5
8.	I feel forced to do many things I wouldn't choose to do	1	2	3	4	5
9.	I feel connected with people who care for me, and for whom I care	1	2	3	4	5
10.	I feel that people who are important to me are cold and distant towards me	1	2	3	4	5
11.	I feel capable at what I do	1	2	3	4	5
12.	I feel disappointed with many of my performance	1	2	3	4	5
13.	I feel my choices express who I really am	1	2	3	4	5
14.	I feel pressured to do too many things	1	2	3	4	5
15.	I feel close and connected with other people who are important to me.	1	2	3	4	5
16.	I have the impression that people I spend time with dislike me	1	2	3	4	5
17.	I feel competent to achieve my goals	1	2	3	4	5
18.	I feel insecure about my abilities	1	2	3	4	5
19.	I feel I have been doing what really interests me	1	2	3	4	5
20.	My daily activities feel like a chain of obligations	1	2	3	4	5
21.	I experience a warm feeling with the people I spend time with	1	2	3	4	5
22.	I feel the relationships I have are just superficial	1	2	3	4	5
23.	I feel I can successfully complete difficult tasks	1	2	3	4	5
24.	I feel like a failure because of the mistakes I make	1	2	3	4	5

Scoring
Autonomy satisfaction: items 1, 7, 13, 19
Autonomy frustration items: 2, 8, 14, 20
Relatedness satisfaction: items 3, 9, 15, 21
Relatedness frustration items 4, 10, 16, 22
Competence satisfaction: items 5, 11, 17, 23
Competence frustration items 6, 12, 18, 24

Appendix 4: CES-DS-R (Persian)

پرسش‌نامهٔ زیر، برای سنجش وضعیت سلامتی شما طراحی شده است. ممکن است هر کدام از سؤالات را احساس کرده یا رفتاری شبیه به آن را تجربه کرده باشید. زمان شروع زندگی مشترک را تا کنون در نظر بگیرید و به ما بگویید که چه قدر این ویژگی ها را احساس کرده یا رفتاری شبیه به آن‌ها داشته‌اید. توجه کنید که ممکن است زمان‌هایی این تجربه وجود داشته، اما اکنون برطرف شده باشد؛ اگر چنین است، لطفاً به آن زمان‌ها بیندیشید و بر اساس آن به سؤالات پاسخ دهید.

۱	۲	۳	۴
به ندرت یا هیچ وقت	زمان نسبتاً کم	به طور متوسط	بیشتر اوقات

***

	سؤالات	پاسخ شما
۱	چیزهایی مرا اذیت می‌کندکه قبلاً برایم آزاردهنده نبوده است.	
۲	اشتهایم کم شده است. زیاد دوست ندارم غذا بخورم.	
۳	احساس می‌کنم حتی با کمک خانواده و دوستانم نمی‌توانم از شر اندوه و ناراحتی خلاص شوم.	
۴	احساس می‌کنم حالم به اندازهٔ بقیهٔ آدم‌ها خوب است.	
۵	به هنگام کار، به سختی می‌توانم خودم را هشیار و سرحال نگه‌دارم.	
۶	احساس افسرده بودن دارم.	
۷	احساس می‌کنم هرکاری که انجام می‌دهم، صرفاً برای رفع تکلیف است.	
۸	نسبت به آینده امیدوارم.	
۹	احساس می‌کنم زندگیم اشتباه است.	
۱۰	احساس ترس می‌کنم.	
۱۱	خوابم با بی‌قراری همراه است.	
۱۲	خوشحال هستم.	
۱۳	کم‌تر از همیشه حرف می‌زنم.	
۱۴	احساس تنهایی می‌کنم.	
۱۵	حس می‌کنم رفتار آدم‌ها دوستانه نیست.	
۱۶	از زندگی لذت می‌برم.	
۱۷	بعضی وقت‌ها بدون این که بتوانم خودم را کنترل کنم، گریه می‌کنم.	
۱۸	احساس غم و اندوه دارم.	
۱۹	احساس می‌کنم آدم‌ها مرا دوست ندارند.	
۲۰	نمی‌توانم روند معمول زندگیم را حفظ کنم و به کارهایم برسم.	

Appendix 5: CES-DS-R (English)

Center for Epidemiologic Studies Depression Scale (CESD)

Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.

1 = Rarely or None of the Time (Less than 1 Day)
2 = Some or a Little of the Time (1-2 Days)
3 = Occasionally or a Moderate Amount of Time (3-4 Days)
4 = Most or All of the Time (5-7 Days)

During the past week:

	Rarely or none of the time (less than 1 day)	**Some or a little of the time** (1-2 days)	**Occasionally or a moderate amount of time** (3-4 days)	**Most or all of the time** (5-7 days)
1. I was bothered by things that usually don't bother me.	☐	☐	☐	☐
2. I did not feel like eating; my appetite was poor.	☐	☐	☐	☐
3. I felt that I could not shake off the blues even with help from my family or friends.	☐	☐	☐	☐
4. I felt that I was just as good as other people.	☐	☐	☐	☐
5. I had trouble keeping my mind on what I was doing.	☐	☐	☐	☐
6. I felt depressed.	☐	☐	☐	☐
7. I felt that everything I did was an effort.	☐	☐	☐	☐
8. I felt hopeful about the future.	☐	☐	☐	☐
9. I thought my life had been a failure.	☐	☐	☐	☐
10. I felt fearful.	☐	☐	☐	☐
11. My sleep was restless.	☐	☐	☐	☐
12. I was happy.	☐	☐	☐	☐
13. I talked less than usual.	☐	☐	☐	☐
14. I felt lonely.	☐	☐	☐	☐
15. People were unfriendly.	☐	☐	☐	☐
16. I enjoyed life.	☐	☐	☐	☐
17. I had crying spells.	☐	☐	☐	☐
18. I felt sad.	☐	☐	☐	☐
19. I felt that people dislike me.	☐	☐	☐	☐
20. I could not get "going".	☐	☐	☐	☐

Appendix 6: General Purpose in Life Questionnaire (Persian)

در این پرسشنامه، با توجه به جدول راهنما در جلوی هر کدام از جمله‌ها عددی بنویسید که بیشتر شما را توصیف می‌کند (یکی از عددهای یک تا هفت).

۱	۲	۳	۴	۵	۶	۷
کاملاً مخالفم	مخالفم	کمی مخالفم	نه موافقم و نه مخالف	کمی موافقم	موافقم	کاملاً موافقم

شماره	گویه	پاسخ شما
۱	اهدافی دارم که برای رسیدن به آن‌ها تلاش می‌کنم.	
۲	دربارهٔ این که چه کسی هستم (هویتم) اعتماد به نفس دارم.	
۳	نسبت به این که در زندگی «به کجا می‌روم»، اعتماد به نفس دارم.	
۴	درک عمیقی از استعدادها و نقاط قوت خودم دارم.	
۵	در زندگی هیچ جهت یا هدفی را احساس نمی‌کنم.	
۶	می‌دانم در زندگی چگونه باید از استعدادها و توانایی‌هایم استفاده کنم.	
۷	در زندگی به خوبی احساس هدفمندی می‌کنم.	
۸	نسبت به آن‌چه که باید در زندگی انجام دهم، نامطمئن هستم.	
۹	در زندگی اطرافیانم مؤثرم و تفاوت ایجاد می‌کنم.	
۱۰	زندگی من ارزشمند و به‌دردبخور است.	
۱۱	احساس می‌کنم برای زندگی کردن دلایل محکمی دارم.	
۱۲	می‌دانم در زندگی چه رسالتی دارم.	
۱۳	زندگیم ارزش هیچ هدفی را ندارد.	
۱۴	به درد جامعه می‌خورم.	
۱۵	زندگی و فعالیت‌های روزانهٔ من، در راستای انجام رسالتم پیش می‌رود.	

Appendix 7: General Purpose in Life Questionnaire (English)

Instructions: Please use the following scale to indicate how much you agree with each statement. Write the correct number from the following scale on the blank provided by each item.

1	2	3	4	5	6	7
Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree

(1) ___I have goals that I am working toward.
(2) ___I am confident about who I am.
(3) ___I am confident about where I am going in life.
(4) ___I have a well-developed understanding of my gifts and talents.
(5) ___I have no sense of direction in life.
(6) ___I know how I should be using my gifts and talents.
(7) ___I have a good sense of purpose in life.
(8) ___I am unsure about what I should do with my life.
(9) ___I make a difference in the lives of those around me.
(10) ___My life is valuable and worthwhile.
(11) ___I have a strong sense of the reasons for my living.
(12) ___I have identified my mission in life.
(13) ___My life does not serve any purpose.
(14) ___I am making a contribution to society.
(15) ___I am taking actions now that are moving toward my mission in life.

Appendix 8: Stressful Life Events Questionnaire (Persian)

سه سال گذشته را در نظر بگیرید و به سؤال‌های زیر پاسخ دهید. بدیهی است ممکن است هر کدام از اتفاقات زیر برای شما مصداق نداشته باشند. اگر چنین است، لطفاً گزینهٔ یک «اتفاق نیفتاده است» را انتخاب کنید. در غیر این صورت با توجه به جدول راهنما گزینهٔ دو یا سه را انتخاب کنید.

جدول راهنما		
۱= اتفاق نیفتاده است	**۲= رخ داده است *ولی اندکی* روی من تأثیر گذاشت**	**۳= رخ داده است *و* روی من خیلی تأثیر گذاشت**

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شماره	رویدادها	پاسخ شما		
۱	در بیمارستان بستری شده‌اید.	۱	۲	۳
۲	تصادف شدید یا بیماری خیلی سختی را تجربه کرده‌اید.	۱	۲	۳
۳	دوست یا عضو خانوادهٔ شما تصادف شدید یا بیماری خیلی سختی داشته است.	۱	۲	۳
۴	همسرتان تصادف شدید یا یماری خیلی سختی داشته است.	۱	۲	۳
۵	سر و کارتان به دادگاه و قانون افتاده است.	۱	۲	۳
۶	همسرتان درگیر مشکلات دادگاهی و قانونی بوده است.	۱	۲	۳
۷	از همسرتان جدا شده یا طلاق گرفته‌اید.	۱	۲	۳
۸	خودتان یا همسرتان شغلی را از دست داده‌اید.	۱	۲	۳
۹	درآمد خانواده‌تان به شدت کم شده است.	۱	۲	۳
۱۰	مشکل مالی خیلی شدید داشته‌اید.	۱	۲	۳
۱۱	ماشین یا منزلتان را دزد زده است.	۱	۲	۳
۱۲	به هر دلیلی خانهٔ شخصیتان را از دست داده‌اید.	۱	۲	۳
۱۳	با همسرتان دعوای شدید داشته‌اید.	۱	۲	۳
۱۴	با دوستان یا اعضای خانوادهٔ خود به شدت دعوا کرده‌اید.	۱	۲	۳
۱۵	همسرتان شما را کتک زده است.	۱	۲	۳
۱۶	همسرتان از نظر عاطفی به شما بی توجه بوده و ازین بابت، به شما ستم کرده‌است.	۱	۲	۳
۱۷	شما همسرتان را کتک زده‌اید.	۱	۲	۳
۱۸	اقدام به خودکشی کرده‌اید.	۱	۲	۳
۱۹	یکی از دوستان یا فامیل شما خودکشی کرده است.	۱	۲	۳
۲۰	گرفتار یکی از بیماری‌های اعصاب و روان شده‌اید و به روان‌پزشک مراجعه کرده‌اید.	۱	۲	۳
۲۱	یکی از دوستان یا فامیل شما به بیماری‌های اعصاب و روان مبتلا شده است.	۱	۲	۳
۲۲	دوست صمیمی یا عضو خانواده‌تان را از دست داده‌اید.	۱	۲	۳
۲۳	شریک عاطفی خارج از رابطهٔ زناشویی تجربه کرده‌اید.	۱	۲	۳
۲۵	متوجه شده‌اید همسرتان شریک عاطفی خارج از رابطهٔ زناشویی دارد.	۱	۲	۳

Appendix 9: Stressful Life Events Questionnaire (English)

Stressful Life Events Questionnaire
SLEQ

Items
1. You were admitted to the hospital.
2. You had a serious accident or illness.
3. Your partner had a serious accident or illness.
4. A friend/family member had a serious accident/illness.
5. You were in trouble with the law.
6. Your partner was in trouble with the law.
7. You were separated/divorced.
8. Your partner lost his job.
9. You experienced a significant drop in income.
10. You had a major financial problem.
11. Your car or house was burgled.
12. You became homeless.
13. You found that your partner did not want your child.
14. You had a serious argument with your partner.
15. You had a serious argument with family or friends.
16. Your partner was physically cruel to you.
17. Your partner was emotionally cruel to you.
18. You were physically cruel to your partner.
19. You attempted suicide.
20. A friend or relative attempted suicide.
21. You suffered from mental illness.
22. A friend or relative suffered from mental illness.
23. Your partner died.
24. A friend or relative died.
25. You had an extramarital sexual affair.
26. Your partner had an extramarital sexual affair.

Note. Participants reported whether the event occurred and whether the event "affected me a little" or "affected me a lot." Mothers also reported whether the event occurred prenatally or postnatally or both. The scoring of the questionnaire resulted in two scores: the objective number and the perceived impact of the events experienced.

Appendix 10: Marital Self-Efficacy Questionnaire (Persian)

این پرسش‌نامه برای سنجش ادراک شما از توانایی خودتان طراحی شده است. لطفاً به تمام سؤالات پاسخ دهید. یادآوری می‌کنیم که پاسخ درست یا غلطی وجود ندارد. برای پاسخ به پرسش‌های زیر به این فکر کنید که تا چه حد می‌توانید هر کدام از گویه‌های زیر را در زندگی مشترک خود انجام دهید.

۱= اصلاً نمی‌توانم	۲= بیش‌تر وقت‌ها نمی‌توانم	۳= نمی‌توانم	۴= نمی‌دانم چه‌قدر توانا هستم	۵= می‌توانم	۶= تا حدی می‌توانم	۷= خیلی خوب می‌توانم

	در رابطه با همسرتان:	پاسخ شما						
۱	چه قدر می‌توانید زمانی را برای صحبت‌کردن دربارهٔ چیزهایی که نگرانتان می‌کند، هماهنگ کنید؟	۱	۲	۳	۴	۵	۶	۷
۲	تا چه حد می‌توانید از این که اختلاف نظرها، رابطهٔ شما و همسرتان را پر از خشم کند، پیش‌گیری کنید؟	۱	۲	۳	۴	۵	۶	۷
۳	چه میزان می‌توانید به دیدگاه همسرتان دربارهٔ مسایل احترام بگذارید؛ هرچند با او موافق نیستید؟	۱	۲	۳	۴	۵	۶	۷
۴	چه‌قدر می‌توانید بدون این که همدیگر را سرزنش کنید، به جنگ مشکلات بروید؟	۱	۲	۳	۴	۵	۶	۷
۵	تا چه حد می‌توانید بدون احساس رنجش انتقادها را بپذیرید؟	۱	۲	۳	۴	۵	۶	۷
۶	چه اندازه می‌توانید هنگامی که با مشکلات فردی رو به رو می‌شوید، حمایت همسرتان را جلب کنید؟	۱	۲	۳	۴	۵	۶	۷
۷	تا چه حد می‌توانید به همسرتان احساس اهمیت و احترام بدهید؟	۱	۲	۳	۴	۵	۶	۷
۸	چه قدر می‌توانید همسرتان را به خوبی در تصمیم‌گیری‌های مهم برای ادارهٔ خانواده به کار بگیرید؟	۱	۲	۳	۴	۵	۶	۷
۹	چه میزان می‌توانید از حریم خصوصی رابطهٔ زناشویی خود محافظت کنید؟	۱	۲	۳	۴	۵	۶	۷
۱۰	چه اندازه می‌توانید از همسرتان در هنگام کشمکش با بستگان (خودش یا خودتان) حمایت کنید؟	۱	۲	۳	۴	۵	۶	۷

Appendix 11: Marital Self-Efficacy Questionnaire (English)

Perceived Marital Self-Efficacy Scale

1	2	3	4	5	6	7
Not well at all		Not too well		Pretty well		Very well

In your relationship with your wife/husband: **How well can you:**

1. Set aside time to talk together about things that worry you
2. Prevent disagreements from turning into angry exchanges
3. Respect your spouse's views on matters even though you disagree with them
4. Deal with problems together without blaming each other
5. Accept criticism without feeling offended
6. Get the support of your spouse when you have personal problems
7. Make your spouse feel important and respected
8. Get your spouse to agree on how to deal with problems with your children and their schooling
9. Get your spouse involved in important decision about how to run the family
10. Support your spouse when the children ignore what they are asked to do
11. Protect the privacy of your marital relationship
12. Support your spouse in handling conflicts with parents