

Narrative review

Divorce and breakup distress: a narrative review

Abstract

This narrative review is a brief summary of papers published on divorce and breakup distress research during 2024. The current divorce rate is as high as 42% in the U.S. and breakup distress is increasingly prevalent. The current literature reviewed here has highlighted many negative effects of divorce and breakups. These include relationship conflicts and income level changes. The conflicts are accompanied by negative emotions including loneliness, depression and suicidality, and eventually emotional adjustment for some. Behavioral effects include stalking and excessive alcohol use. Cognitive decline has primarily been described as decreased memory. Physical effects were focused on health problems and heartbreak syndrome including symptoms that mimic heart attacks. Many risk factors have also been the focus of recent research including parental divorce, neurological conditions and multiple premarital sex partners. Emotional risk factors have included psychiatric disorders, most frequently depression. Relational issues including conflict, hostility, withdrawal and sexual problems have also been considered risk factors for divorce. Surprisingly, only a few studies have focused on potential underlying biological mechanisms including elevated hypothalamic-pituitary-adrenal activation, dysfunction in the prefrontal cortex and reduced volume of the hippocampus. Intervention trials have included psychotherapy and transcranial direct current stimulation. Methodological limitations are the many self-report and cross-sectional studies that cannot determine directionality of effects and risk factors.

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Introduction

Divorce research has been historically focused on its negative effects on children and adolescents of divorced families. Fewer researchers have focused on the effects or risk factors for the divorced adults. In this narrative review, some of the latter research is summarized along with research on breakup distress.

The empirical studies and review papers summarized here were derived from a search on PubMed and PsycINFO entering the terms divorce, breakup distress, adults and the year 2024. Exclusion criteria for this review included proposed protocols, case studies and non-English language papers. The publications can be categorized as negative effects of divorce, predictors/risk factors, interventions and potential underlying biological mechanisms. Accordingly, this review is divided into sections that correspond to those categories. Although some papers can be grouped in more than one category, 17 papers are focused on the negative effects of divorce, 13 papers on predictors/risk factors for divorce, 3 papers on interventions and 4 papers on potential underlying biological mechanisms. A discussion on methodological limitations of this literature follows those sections.

Negative effects of divorce and breakup distress

Many negative effects have been reported for divorce and breakup distress including immediate practical effects, emotional problems, behavioral effects as well as cognitive effects and health effects (Table 1). The immediate effects include relationship conflicts and income changes. The emotional effects include loneliness, sadness, depression, anxiety, suicidality, and emotional adjustment. The behavioral problems include stalking and excessive alcohol use. Cognitive decline refers to memory problems. And the physical effects are health problems and heartbreak syndrome including symptoms of heart attacks.

Immediate effects

Relationship conflicts and income changes have been reported as immediate effects of divorce. In a study on relationship

conflicts immediately following divorce and for the following year, **relationship conflicts** were reported for divorced couples, and in some families, relationship conflicts were also noted between parents and their children (N= 133).¹ In this study, diaries were written for 14 days every six months and they were subsequently content coded. The authors reported that the "blurring of hierarchical boundaries that define developmentally suitable family roles" were contributing to relationship conflicts.

Table I Negative effects of divorce and breakup distress (and first authors)

| Negative effects | First authors |
|---|-----------------------------|
| Immediate effects | |
| Relationship conflict | Van Dijk |
| Income change | Leopold |
| Emotional effects | |
| Loneliness | Sheftel, Wahring, Koren |
| Sadness and hurt feelings depression | Gehl |
| Suicidality | Edwards, Valladares-Garrido |
| Emotional adjustment | Tran |
| Cognitive effects | |
| Poor memory performance | Hanes, Chandra |
| Behavior effects | |
| Stalking | Kanemasa |
| Excessive alcohol use | Ford |
| Physical effects | |
| Health problems | Pellon-Elexpuru |
| Heart break syndrome | Field, Ahmed |
| | |

In a study on **income change** entitled "Reassessing chronic strain: a research note on women's income dynamics after divorce", 3400 divorces in Germany were assessed.² Unexpectedly, the women returned to or exceeded their pre-divorce income by "re-partnering or by mobilizing their own productive skills".

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Emotional effects

Emotional effects of divorce that have been the focus of recent research include loneliness, sadness, depression, anxiety, suicidality, and emotional adjustment. In a review on seven cross-national studies in 20 countries representing 47% of the global population, divorce and widowhood were the most significant predictors of **loneliness**.³ Changes in work played a more minor and less universal role in loneliness. Chronic loneliness ranged from 2% to 25% with 4% in Denmark and 15% in Greece. As might be expected, living alone was significantly associated with chronic loneliness.

Relationship dissolution effects on loneliness were also studied in research from Germany (N=1,530).⁴ In this sample, post-breakup loneliness varied by gender. Surprisingly, loneliness was more prevalent in males than females given that the related depression emotion is typically more prevalent in females. Men relative to women were also less likely to initiate the separation, were less satisfied with singlehood and were more desirous of having a new partner. These findings were also surprising given that women are often depicted as being more dependent on their spouses and on marriage.

In a qualitative study, interviews were conducted with 33 family members experiencing being alone after a late – life divorce.⁵ The most common terms used for divorce were both **freedom and loneliness**. The use of those terms may depend on who initiated the divorce as freedom more than loneliness may be experienced by the initiator while the partner may experience loneliness more than freedom.

Longitudinal studies on the relationship between divorce and loneliness are needed. Divorce and loneliness are likely bidirectional factors with divorce leading to loneliness and loneliness leading to divorce. The prevalence of loneliness, elaborated recently by the surgeon general as being the biggest health problem, highlights the importance of longitudinal studies on risk factors as well as interventions for loneliness associated with divorce and breakups.

Sadness and hurt feelings have been reported in 80 narratives by divorcees.⁶ In this study entitled "Emotional experiences of ghosting", ghosting was defined as unilaterally ending a relationship by ceasing communication. While the "ghostees" reported more sadness and hurt feelings, the "ghosters" reported more guilt and relief. These results were predictable as these two different roles in breakups have been repeatedly referred to in the breakup distress literature as "dumpees" and "dumpers".

Depression and anxiety symptoms have been reported in a recent study on breakup distress (N= 196).⁷ Pre-breakup attachment insecurities were related to greater post-breakup depression and anxiety symptoms that, in turn, were mediated by self-punishment. The mediator/moderator results like these are typically not surprising as the predictor, mediator and outcome variables are pre-selected by the researchers based on their theories, sometimes called biases.

Suicidality has also been referred to as a negative emotional effect of divorce, although it could also be considered a negative behavioral effect of divorce if it involves not only ideation but also attempts. In two studies on suicidality by the same author, divorce was a notable risk factor for suicidality. In a study on divorce as a risk factor for suicide attempts, the Swedish national study was used as a database (N= 1,601,075).⁸ Risk for suicide attempts was highest in the year following divorce, but it remained elevated five years later. Females and those in shorter marriages were at the greatest risk for suicide attempts. A limited number of select variables and the absence of regression analysis to determine the relative contribution of the predictor variables make these results tenuous, especially in light of the previously described findings that males were experiencing more vulnerability following divorce.

Divorce as a risk for suicidal thoughts and behaviors has also been studied in a sample of Chinese women who experienced recurrent major depressive disorder (N= 4380).⁹ In this sample, divorce was significantly associated with increased risk of suicidal ideation, plans, and attempts. These findings are not generalizable given that the sample was exclusively women, and women who were experiencing recurrent major depressive disorder. Their suicidality could also derive from their depression and especially from their divorce and depression combined.

In a cross-sectional study during the pandemic in Peru, a "major love breakup" was experienced by 20% of the sample (N=370) and 34% had suicidal ideation.¹⁰ Suicidal ideation was reputedly exacerbated by insomnia and anxiety symptoms, but the insomnia and anxiety symptoms could have also led to the suicidal ideation. In these studies that are typically cross-sectional, directionality of the different variables could not be determined. Surprisingly, longitudinal studies have rarely been conducted on potential predictors of suicidality. This probably relates to limited funding available for expensive longitudinal studies, but it's surprising that funding would be limited for a condition as severe as suicidality.

At least one positive outcome has been addressed in this literature. In a paper entitled "Resolving relationship dissolution – what predicts emotional adjustment after breakups?", several variables were entered into an analysis to determine their importance for **emotional adjustment** (N= 3734 breakups in Germany).¹¹ In this analysis, the variables that predicted emotional adjustment were initiator status, having a new partner, time since the separation and satisfaction with your social network. These were all predictable predictors but again, their relative significance was not determined. In this case, however, that determination may not help inform intervention protocols given that none of these predictor variables could likely be controlled or altered by interventions.

Behavioral effects

Surprisingly, only two negative behavioral effects have been noted following breakups including stalking and excessive alcohol use. In the study on **stalking**, longitudinal data were collected from adults in Japan who had experienced breakups (N=356).¹² The results suggested that attachment anxiety at the time of the breakup increased future stalking behaviors through higher levels of post-breakup anger and rumination. The attachment anxiety, anger and rumination may have also contributed to the breakups.

Other researchers have reported an association between divorce histories and **unhealthy alcohol use**.¹³ This research, based on the English Longitudinal Study on Ageing, suggested that greater numbers of divorces led to binge drinking, which was defined as greater than six drinks per occasion for females and greater than eight drinks per occasion for males. The duration of adulthood that was spent divorced was not associated with drinking frequency or binge drinking likely because the binge drinking preceded the time of the divorce and continued beyond the post-divorce period.

Cognitive effects

Cognitive decline has also been noted following divorce. A comparison has been made between a group who experienced divorce and a group who experienced widowhood based on data from the Health and Retirement Study (N=23,393).¹⁴ Performance on memory tests was worse for divorced versus married individuals. However, lower rates of decline were noted following divorce than following

widowhood. Widows had accelerated rates of decline following spousal death likely because depression and reduced serotonin levels were more pronounced for the widowhood than the divorce experience. The divorce experience is often accompanied by anger and increased levels of activating neurotransmitters like serotonin and dopamine that are less likely to contribute to cognitive decline.

In a relatively small sample (N=543), **memory performance** was also inferior after divorce.¹⁵ PET scans revealed that divorced individuals had **greater amyloid beta load** which led to their memory problems. Memory decline was a less severe effect of greater amyloid beta load than might be expected given that greater amyloid beta load often leads to serious diseases.

Physical effects

The greater beta amyloid load may have contributed to the **physical health problems** noted following divorce. However, this factor was not measured in a medical analysis (N=94 studies and 1,000,384,507 participants) in which worse health was self-reported by divorced individuals.¹⁶ Their self-reports included physical symptoms noted to be significant risk factors for diabetes, joint pathology, cardiovascular, and cerebrovascular conditions as well as sexually transmitted diseases. The risk factors aside from divorce were female gender, being unemployed, being childless, having less education, having less exercise, being overweight, and heavy use of alcohol. Unfortunately, the relative significance of these variables was not determined in this multivariate study.

Breakup distress and **broken heart syndrome** have been noted to follow relationship breakups, divorce or the death of a loved one and are frequently accompanied by heart attack symptoms but not the permanent heart damage associated with a real heart attack.¹⁷ Broken heart syndrome has come to be known as cardiomyopathy or takotsubo syndrome because the shape of the reversible left ventricular dysfunction during this state of acute heart failure resembles that of Japanese fishers' takotsubo pots which they use to trap octopuses.¹⁸ The heartbreak syndrome usually starts unpredictably and abruptly following a stressful event such as a broken or lost relationship. This is typically a temporary condition that resolves on its own.

Predictors/risk factors for divorce and breakup distress

Many predictors/risk factors for divorce have been identified in this literature. These include premarital conditions, depression, relationship conflicts, situational effects, as well as multiple risk factors that have been addressed within a couple studies (Table 2).

 Table 2
 Predictors/risk factors for divorce and breakup distress (and first authors)

| Predictors/risk factors | First authors |
|---|-----------------|
| Premarital factors | |
| Intergenerational transmission divorce (parental divorce) | Stanfors |
| Neurological condition | Metsa-Simola |
| Genetic predisposition to psychiatric disorders | Salvatore |
| Multiple premarital sex partners | Smith |
| Emotional factors | |
| Depression | Duncan |
| Relational factors | |
| Hostility and withdrawal | Ryjova |
| Sexual problems | Zenoozian |
| Situational factors | |
| COVID-19 | Liu |
| Multiple Factors | Latifian, Shita |

Premarital conditions as risk factors for divorce and breakup distress

The premarital precursors/pre-existing conditions have included parental divorce that was also called intergenerational transmission of divorce, genetic predisposition for psychiatric disorders, depression, neurological conditions, and having had multiple premarital sex partners.

In a paper entitled "Intergenerational transmission of divorce in Sweden, 19 20–2015", the risk of divorce was greatest when the wife or both spouses had experienced **divorce of their parents**.¹⁹ The transmission was stronger and more stable across time for women than for men, which seemed to be uninterpretable by the researchers. This stability of **intergenerational transmission** occurred despite societal changes over the year which was also difficult to interpret.

Genetic predisposition for psychiatric disorders has been associated with the propensity to divorce. In a study on family genetic risk profiles associated with divorce, the Swedish National Registry database was used to determine genetic risk (N= 2,000,828 777).⁸ Genetic risk was inferred from diagnoses of relatives including major depression disorder, anxiety disorders, obsessive compulsive disorder, bipolar disorder, schizophrenia, anorexia, alcohol use, drug use disorder, ADHD and autism. The genetic predisposition for divorce was greater among females and those who did not have a stable second marriage, suggesting a predisposition for singlehood or not staying married. The genetic predisposition for having all these risk factors would have been difficult to separate from the environmental exposure to relatives with these disorders in a complex data analysis.

In a study entitled "Neurological conditions and subsequent divorce risk in the Nordic countries", 22% of adults were experiencing neurological conditions (N=2,809,209).²⁰ Twelve percent of marriages that involved a spouse with a **neurological condition** ended in divorce. The imbalance of this physical condition across spouses and the dependency of the neurologically impaired spouse on the unimpaired partner likely contributed to the divorce. Data on the 10% of the couples who did not divorce despite one spouse having a neurological condition would have been informative for intervention purposes.

Multiple premarital sex partners is another precursor condition that has been considered a risk factor for divorce based on data from the National Longitudinal Study on Adolescent to Adult Health.²¹ In that data analysis, the relationship between multiple premarital sex partners and divorce was significant. Having nine or more premarital sexual partners led to the highest rate of divorce, followed by those with one to eight premarital sex partners. These data are not surprising, but the lack of gender differences is surprising based on the gender differences noted in some of the previously summarized studies. It would also be interesting to know how much the knowledge about premarital sex partners contributed to worrying about marital infidelity that, in turn, predicted to divorce. Having multiple premarital sex partners may have contributed to marital infidelity. Although marital infidelity was not a variable in this study, it's plausible that having multiple sex problems may have continued from the premarital to the marital period and contributed to the divorce

Depression as a risk factor for divorce and breakup distress

Depression has been a significant risk factor for divorce. In a study on dyads in the Future of Families and Child Well-being Study, the dyads (N=1575 dyads) were seen over a nine-year period.²² Depressive symptoms and parenting stress led to divorce among these dyads. It's not clear whether the parenting stress and depressive symptoms were experienced by both partners of the dyad, but depression in one's partner can be worrisome given the data on the contagion effect of depression and the guilt and helplessness felt by the non-depressed partner.

Relationship risk factors for divorce and breakup distress

A few relationship risk factors have been noted for divorce. These include hostility, withdrawal, and sexual problems.

Hostility and withdrawal in conversations of couples have led to divorce one year later (N= 106 couples).23 In this study, couples were given smart phones to record their conversations, and the results of the content analysis of the conversations suggested that hostility in their conversations at time one was positively correlated with aggression and negatively correlated with relationship satisfaction at time two one-year later. Also, withdrawal in their conversations at time one was associated with aggressive conversations at time two one-year later. Hostility and withdrawal at time one predicted separation of the couples at time two one-year later but warmth and faithfulness predicted relationship satisfaction. Researchers often select a couple variables that would predictably lead to negative outcomes rather than exploring multiple predictor variables which would have more external validity and following a regression analysis or structural equation modeling would be more informative for intervention purposes.

In a study entitled "The prevalence of sexual problems in the divorced population", a meta-analysis was conducted on 14 studies.²⁴ **Sexual problems** were reported by 47% of the divorced population including 43% of females and 52% of males. These data are not surprising, although data analyses comparing the prevalence of sexual problems and their predictors in the divorced versus the non-divorced populations would have been more informative.

Situational and multiple problems as risk factors for divorce and breakup distress

Situational problems have derived from COVID, and multiple risk factors have been entered into data analyses in at least two studies.

COVID has affected divorce, but inconsistently across two studies. In one study on marital status and happiness during COVID, data were taken from the National Social Life, Health and Aging project (N=2622).²⁵ In this database, the married respondents reported increased unhappiness during COVID. Only the divorced respondents remained consistently more unhappy across COVID. In contrast, in a significantly larger sample (N= 892,700), gray divorce rates (defined as divorce occurring for adults 50-years-old and older) decreased during the pandemic.²⁶ It is not surprising that unhappiness increased or remained constant across COVID for married and divorced respondents as unhappiness happened virtually to everyone. The decreased divorce rates may have related to the difficulty of filing for divorce during the pandemic.

Multiple risk factors have been assessed in at least two studies in this literature. In one study the relationships between **Internet addiction, domestic violence, and emotional divorce** were explored among married women in Tehran (N= 400).²⁷ In this sample, 46% of all married women suffered emotional divorce. Emotional divorce may refer to being only emotionally divorced, not legally divorced, as in being emotionally removed/ separated while still married. In this study, emotional divorce was related to Internet addiction and domestic violence and was negatively related to education level and employment status of the women. The women may have been experiencing emotional divorce because of internet addiction and violence but did not seek legal divorce because of limited resources including low education level and employment status.

An even greater number of risk factors was noted for divorced women in a study from Ethiopia.²⁸ The prevalence of divorce was 21% in this sample, and 50% of the divorced women ended their marriage as late as 11 years after getting married. **Multiple significant risk factors** were seven years age difference, early marriage, infertility, presence of third parties, females without a formal education, females in the workforce, sexually dissatisfied females, women living separately, partner violence, control behavior by the males, drug abuse in the males, no children, and women with multiple sex partners. The same risk factors were reported for shorter marriages. It is not clear how the marriages in this study could have lasted for as long as 11 years given the significant number of risk factors that was reported by both female and male participants. And the relative importance of these multiple risk factors was not determined by relevant regression analysis or structural equation modeling.

Interventions for divorce and breakup distress

Only a few intervention studies could be found in this literature on divorce and breakup distress. These included two psychological interventions including psychotherapy and a therapeutic interview and a neurological therapy called transcranial direct current stimulation. (Table 3)

Table 3 Interventions for post-divorce and breakup distress (and first authors)

| Interventions | First authors |
|--|-----------------|
| Psychotherapy | Farber |
| nterview | Fenske |
| Transcranial direct current stimulation | Alizadehgoradel |

In a psychological intervention entitled "After the thrill is gone: the role of psychotherapy", **psychotherapy** was effective.²⁹ In this sample (N= 1846, mean age = 31), 75% attended psychotherapy after their breakups. The younger respondents, those in longer relationships, and those with higher scores on the Experience in Close Relationships Scale found therapy to be more effective. It would seem that those respondents who were younger, had experienced longer and more positive relationships were more troubled by the breakups and possibly in greater need for the psychotherapy which may have explained their greater response to therapy.

Simply having an interview appeared to be effective in a study entitled "It got me thinking: the impact of participating in a divorce decision – making interview" in which interviews were given at baseline and one year later (N=30).³⁰ In response to the question "How did the Initial interview impact your thinking about the future of your marriage?", three salient themes emerged:

- 1) Talking got me thinking;
- 2) Thinking got me acting; and
- 3) The conversation was (surprisingly) therapeutic.

Interestingly, the results given did not include how this interview affected the actual decision-making about a divorce.

In a randomized controlled trial, **transcranial direct current** stimulation was used to determine whether enhancement of the dorsolateral prefrontal cortex (DLPFC) and the ventrolateral prefrontal cortex (VLPFC) could reduce the negative symptoms of romantic relationship breakup.³¹ The symptoms of depression and anxiety were reduced by the stimulation in both regions. Although the reduction of symptoms was greater for the stimulation of the DLPFC than the stimulation of the VLPFC. It is unclear how this could be interpreted given that the DLPFC is associated with cognitive functions like working memory and decision-making while the VLPFC is more involved with processing emotional information. It could be that the stimulation of the DLPFC was sufficient for folks to decide to no longer report depression and anxiety symptoms, as in decision-making, while the stimulation of the VLPFC may have been insufficient for the actual processing of the emotional information related to the breakup.

Potential underlying biological mechanisms for divorce and breakup distress

In previously discussed research on heartbreak syndrome (cardiomyopathy/takotsubo syndrome), the heart attack symptoms are thought to derive from **stress-induced HPA activity** (hypothalamic-pituitary-adrenal activation) including elevated cortisol and epinephrine.¹⁷ The heart attack symptoms would be expected to, in turn, exacerbate the breakup distress. (Table 4)

 Table 4 Potential underlying biological mechanisms for divorce and breakup distress (and first authors)

| Mechanisms | First authors |
|---|-----------------|
| Dysfunction in the dorsolateral and ventrolateral prefrontal cortex | Alizadehgoradel |
| Greater amyloid beta load | Chandra |
| Decreased activation hippocampal and amygdala | Tran |
| Smaller bilateral hippocampal volume | Acosta |
| Heartbreak syndrome (cardiomyopathy/ takotsubo syndrome) | Field, Ahmed |
| Elevated HPA activity | Field |

The intervention effects of stimulating the **DLPFC and the VLPFC** in the previously mentioned study implicate less activation of those regions of the brain as potential underlying biological mechanisms for divorce.³¹ It's not clear, however, whether those regions were being affected by the negative experiences in the marriage that led to the divorce or they resulted from the distress of the breakup or both, highlighting again the need for longitudinal studies.

In another previously discussed study, PET scans revealed that divorced individuals had **greater amyloid beta load** (which forms plaques in the brain and can kill brain cells). The greater amyloid beta load led to memory problems in that study.¹⁵ Because greater amyloid beta load often leads to diseases, it may have also contributed to the physical health problems following divorce noted in the physical health study already described.¹⁶

In a paper entitled "Hippocampus, amygdala and insula activation in response to romantic relationship dissolution", fMRIs were conducted (N = 36 divorced and 28 non-divorced adults).³²

Being the initiator of the divorce was associated with increased activation in the **hippocampus and the amygdala**. Being the initiator of the breakup was also associated with greater emotional adjustment in a previously described study.¹¹ Unfortunately, many studies measure only physiological or psychological variables but not both.

The **hippocampus** has been implicated in another study on breakup distress.³³ Hippocampal magnetic resonance imaging was conducted to measure gray matter volume (N=196). Only those who had a breakup experience had less bilateral hippocampal volume. Given that the hippocampus is involved in transferring short-term memories into long-term storage in the brain, it could be adaptive that the hippocampal volume was reduced in those with a breakup experience, as they would not want to have long-term memories of the breakup. Nonetheless, the marital difficulties and/or the breakup distress were apparently responsible for the lessening of the hippocampal volume.

Methodological limitations of this literature

This recent literature on divorce has methodological limitations that include the variety of sampling methods, the different types of divorce/relationship dissolution and the different measures and types of data analyses. The samples have varied by being selected from an archival database, being surveyed or being involved in an empirical study. Further, the developmental course of separation and divorce was rarely explored in longitudinal studies, as most of the research in this current literature is cross-sectional. For that reason, directionality of effects and risk factors could not be determined. Some variables, for example depression, were both effects of divorce and risk factors for divorce.

Demographic factors like age and gender were rarely reported. Age differences might be expected to affect the severity of divorce effects. Partners being greater than 7 years apart in age was a risk factor along with several other risk factors in one study. Gender differences were inconsistent as noted in two studies, with males experiencing more loneliness following divorce in one study and females being at greater risk for divorce as well as more often being the initiator of the divorce in another study. And these effects were confounded by variables other than divorce, for example, shorter marriages.

Several risk variables that were the focus of earlier research on divorce rarely appeared in this recent literature, possibly because they had been over-reported in that earlier literature. Examples include partner illness/disease, infertility, co-parenting conflict, extramarital affairs, partner-controlling behavior, drug abuse, and domestic violence. It is likely that these problems are still occurring, but research groups may have been alerted to other problems they felt would make more novel contributions to the literature on divorce effects as, for example, loneliness and suicidality.

Surprisingly, half of the studies in this current literature on divorce effects have focused on negative effects of divorce and the other half have focused on risk factors. At least one of the negative effects, namely depression, was also treated as a risk factor, again raising the question of directionality.

The research on potential underlying biological mechanisms has revealed neurological problems including greater amyloid beta load and gray matter volume reduction in the hippocampus. These problems could have also resulted from depression that was comorbid with divorce. Again, directionality cannot be determined from these typically cross-sectional studies. Gene studies were not found, although they have been, for example, in the recent literature on the related post-traumatic stress disorder.³⁴ Only a few intervention studies appeared in this current literature including psychotherapy and transcranial direct current stimulation. Surprisingly, no cognitive behavioral therapy studies appeared in this literature, unlike literature on other problems like depression and PTSD that have featured many cognitive behavioral therapy studies.

Despite these methodological limitations, this current research on divorce has been informative. The serious negative effects of divorce on physical health problems, depression and suicidality highlight the need for more empirical studies on risk factors to identify those who need therapy and intervention research to identify effective therapy protocols.^{35,36}

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Conflicts of interest

Author declares that there are no conflicts of interest.

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