

Physical and Mental Health Differential by Income Level Amongst the Divorced: A Focus on Midlife Divorce[†]

Seung-Eun Cha*, Gyoung-Hae Han¹

Research Professor, Dept. of Institute of Population and Aging Research, Hanyang University, Korea

¹Professor, Dept. of Child and Family Studies, Seoul National University, Korea

Abstract : The purpose of this study was to analyze the differences in the health status of the divorced population according to their income status and to explain the social mechanisms. By analyzing 287 midlife men and women divorced within the last 5 years, we found a strong inverse relationship between their health and income status: the low-income divorced group was more liable to depression and poor physical health. Lack of social connections and having less hope for remarriage after getting a divorce were main factors explaining health vulnerability of the low income group among divorced. Further details have been discussed.

Key Words : midlife divorce, health inequality, social resources, prospect for remarriage.

I. Introduction and Background

Rapid and dramatic increases of the divorce rate over the last few decades¹ are attributed to several distinctive changes in the divorced population. First, as the successive increments of divorce rate have developed, the total population of those, who experienced a divorce has increased. Secondly, the composition of the divorced population has diverged, as the recent divorce rate increased regardless of age or class. Especially during the last few decades, the increase in midlife and golden age divorce were the salient part of the total increment of the crude divorce rate (Korean National Statistic Office, 2006). We are now able to observe a large age distribution in divorced population. This implies that attitude towards divorce, personal experiences of divorce and even post divorce life situations may vary

among different cohorts or age groups.

According to Plath (1980), a sense of security and accomplishment in the second half of adulthood, namely midlife to older age, depends on the knowledge that they have *on track* in their adult progress. When divorce is settled in midlife, it creates a sense of being *off-track* in life-course development. Korean society may have come to some way toward the social acceptance of single life during the last few decades (Ok *et al.*, 1998). But for this cohort of men and women, including most of the baby boomers of Korea who were socialized during an era of traditionally gendered role and family

1) According to the Korean National Statistical Office (2006), the Korean divorce rate has increased rapidly during the last few decades. The crude divorce rate has developed gradually from 0.4 in 1970 to 1.1 in the year 1990. After the 1997 economic bailout, the growth of the crude divorce rate increased rapidly, and in the year 2003, the rate reached 3.5 per 1000 person. It took only 30 years to reach this number while most western countries took nearly over 100 years.

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*Corresponding Author: Seung-eun Cha, Research Professor, Institute of Population and Aging Research, Hanyang University, Korea.

Tel: 82-2-2220-2716 Fax: 82-2-2220-2717 E-mail: haibin@hanyang.ac.kr

values and who live in a culture that generally considers *marriage* the norm for adults, there appears to be a fair degree of health risk associated with being in single (Marks, 1996). Past works on divorce, however, has mostly focused on the marital breakup in early adulthood, neglecting the difficulties and dynamics of midlife divorces. We argue that it is important to fill these gaps in our current knowledge of divorce. Therefore, this study intends to examine the consequences of divorce in midlife.

When considering the consequences of divorce, considerable research has focused on how life event, either desirable or undesirable, influence health over a life time. Even before Booth and White (1980) documented divorce as the most significant life-changing process, researchers of a variety of disciplines wrote about the effect of divorce on health. Most attempts to explain health vulnerability of divorce were focused on the nature of hardships and difficulties managing everyday life of the divorced as a group. In western societies, where divorce was more common than Korea, this research has continued by examining the contingencies under which divorce has had deleterious effects upon individuals throughout the life course. The effect of divorce on health is no longer known to be as simple as an inevitable decline in health status (Hemstrom, 1996; Umberson & Willams, 1999). In addition, there has been an increased recognition of the complexity of health itself, and multiple pathways in the divorce process. This has resulted in calls for more detailed information of health outcomes and linkage to social condition that divorce has realized. But there have been few attempts to explore these issues beyond gender difference. Other social differences such as socioeconomic status (SES) differences could offer valuable insights which would show different picture of the effects of divorce. In order to explore multiple paths and inequality that divorce produce, this study will be focus on health differences and post divorce income status.

The importance of socioeconomic status, mostly income status, as a context for health has been widely

recognized in recent years. Empirical findings are quite consistent, supporting the inverse relationship between income and health problems: the lower the income, the higher the incidences of depression, the prevalence of health problems and even an increase in death rate (Allen, Miech & Shanahan, 2000; McDonough & Berglund, 2003; Mulatu & Schooler, 2002). According to Kawachi (1999), this negative relationship between income and health is consistent whether income inequality is measured at an individual level or at the level of the neighborhood community or even society as a whole (McDonough & Berglund, 2003). Even though the causality of income and health still needs further investigations, many have reached similar conclusions that there are huge health disparities between income groups.

Especially in Korea, since the 1997 economic bailout, economic conditions turn out to be critical factor not only in health matters but also in the security and maintenance of individual families. Lee (2003), in his recent research, analyzed the empirical financial indexes after the '97 economic crisis and its link with high divorce rates. He insists that the economic crisis of the country had negative effects on the finances of individual families, which was closely linked to marital breakup. Lee's (2003) hypothesis gets clearer as we look at the studies showing the divorce experiences on a personal level in these same periods. During the economic bailout and until recent years, financial problems were the most frequently mentioned motives for a divorce, regardless of gender or age (KNSO, 2000, 2005). Other recent study (Han, Kim & Kang, 2005) also show that a great number of married couples decided to divorce in order to get out of the poor financial situation of their family. Some reported that they got divorced because of their ex-spouse's financial failure, mostly bankruptcy or unexpected job loss. The economic companionship of marriage has fallen and this recent marital breakup is producing more financial risks to some families. We would like to describe the nature of the inequality that divorce may produce.

This study seeks to go beyond the previous research in this area by investigating further (1) whether a differentiated picture of physical and mental health is found if the post divorce income has been examined (2) Whether post-divorce income status affect health though the differences it produces result in change of economic status and the likelihood of having social resources.

II. Literature Review

1. Health as an outcome of divorce

That health is multidimensional has become increasingly clear to most social scientists over the past two decades. The World Health Organization (WHO)'s definition of health, that health consists of physical, mental and social dimensions, confirms the multiple aspects of health. Health in its various levels and other manifestations unfolds over time, both historically and personally. Disease evolves; symptoms and risk factors change with age. From the life span perspective, health is known as a phenomenon that develops from birth and continues to change throughout life (Spiro, 2001). Indeed, the most important implication of adopting a life-span approach may well be viewing health as a dynamic process rather than as a stable state. Therefore, it is important to recognize that any developmental event can be antecedents to individual health.

There is a common understanding that unmarried individuals who went through a recent divorce have poor mental or physical health (Booth & Amato, 1991; Booth, Edward & Johnson, 1991; Goldman & Hu, 1993; Ross *et al.*, 1990). Empirical evidence mostly support this relative vulnerability of a divorced person: Lower scores in self-rated health, higher scores in depression or illness symptoms are more prevalent in a divorced person than in a married person (Cha & Han, 2006; Gove, Hugh, & Style, 1983; Park, 1995). In most countries, the divorced showed the highest mortality rate, followed by widows, the never-married, and the

married (Gove, 1979; Hemstrom, 1996).

As we look at previous studies, there are two basic types of study samples that have been used, the first of which studies both divorced and married population. Based on cross-sectional designs, these studies (Cha & Han, 2006; Park, 1995) tested between group differences in order to infer differences about the transition from married to divorced status. They also conducted a comparison with married couples to identify the problems common in all families and problems unique to divorced families.

The second type of study sample is comprised of the divorced only. In Korea, most of the studies on divorce can be classified by this second type. The main aims of these previous studies were to have better insight into the divorce process, mainly focusing on divorced women (Kim, 2003; Han, 1993a, 1993b; Han *et al.*, 2005; Ok, & Sung, 2004; Ok *et al.*, 2004; Noh, 2001) or to discover the influence of patriarchy on divorce (Lee, 2000). As a result, most of the divorce research emphasized shared experiences of marital breakup or the emotional impact of divorce on women. Within-group differences of divorce experiences or health inequality were not the main subject in previous research. Therefore, we have a dearth of information regarding what type of divorced person is likely to experience most of the social inequalities that divorce produces. The association between income, health and divorce could give us a nice piece of information about the diversity of post divorce experiences.

2. Association of divorce, health and economic hardship

The benefits of marriage primarily derive from the dual-earning potential of the married (Bartfeld, 2000; Duncan & Hoffman, 1985; Ross *et al.*, 1990). As soon as the economic security of the family system fails, an immediate shrinking of its financial condition follows, resulting in severe difficulties in post divorce life.

Interestingly, although economic problems and financial pressures of divorce are well described by

previous studies, there is a dearth of research directly depicting *who is vulnerable and how it came to be*. Very few previous literatures give us important but contradicting clues to figure it out. One argument comes from the early divorce research of Arendall (1994)'s. In fact Arendall's work (1994) was focused on the risk of women, but it still gives us some knowledge to understand the effect of divorce on socioeconomic status. She stated that divorce creates "downward mobility" in life, pushing the divorced far below the poverty line. It seemed to emphasize the negative effect of divorce from the middle to upper classes, as the drop in SES status can be more severe to those families than to their counterparts. Therefore, in contemporary society, divorce is known as a leading factor of poverty (Morgan, 1989). From this notion, we can expect that, at least in the post divorce situation, the income gap among the divorced may be not so large to produce health differences.

Others have insisted the economic impact of divorce is linked differently according to a context (Hemstrom, 1996; Umberson & Williams, 1999). They assume that health status of the divorced be varied according to how they efficiently drew upon economic and social resources. After the divorce, one can stabilize his/her income by participating in the labor market or by receiving support from public/private support system. In addition, studies which examined intergenerational exchanges within divorced families (Ok & Sung, 2004; Park & Han, 2006) offer clear evidence of the contribution of income status of the family of origin on post divorce income status. Therefore, Hetherington & Kelly (2002) recognized socioeconomic standing, especially income, as a relevant indicator of self-achievement after divorce. On this basis, the income gap seems to be no less among the divorced and the income gap may lead the divorced toward different risks of post divorced life.

3. Explaining linkages between income, health and divorce.

We have mixed knowledge of exactly how a health

difference by income, if they exist, is created among the divorced. A detailed analysis of the social process is theoretically important because it underscores the need for more dynamic conceptualization. In this study, we introduce three possible factors that might explain the health differentials by income, namely the experience of a financial shake up, a lack in coping resources and the prospect for future marital status. The prospect (or emotions) for future marital status issue has seldom been mentioned in earlier studies, though, we think this future prospect may have an influence on health, in terms of the possibility of getting back "*on track*". Financial shake up or lack of social resources have been introduced in many previous studies. However in this research, we wanted to focus more on the age of the divorced and their developmental stage.

1) The experience of shrinkage in economic resources

Considering the case of a divorce, not only low income itself but also the change in economic conditions can be important factors which cause health differences in accordance to the income level. As mentioned above, the divorced person experiences a drastic drop in their standard of living after getting a divorce. Researchers, who investigated the relationship between income change and health, mostly confirm that the experience of income change, especially income decline, has a negative effect on health (Duncan & Hoffman, 1985; Morgan, 1989). Moreover, longitudinal studies show us that in spite of improvements in financial circumstances, the effects of earlier economic hardships on health do not easily disappear (McDonough & Berglund, 2003). This implies that income decline can lead to poor health, more than certain low income status per se.

Another consideration, when associating income and health, is the timing of the divorce occurred. Middle age is the period when personal income levels and careers both reach their peaks and begin to decline (Staudinger & Bluck, 2001). Recently, the Korean job market changed its income system from a seniority based to a

productivity based wage system (Park, 2006). This trend has led to the rapid decline in income levels of those in their 40's and older. It implies that it is getting more difficult for the midlife divorced to expect any further increase in their income within short periods of time. This may result in immediate decline of health status after the divorce. Financial decline or shrinkage may act as a factor explaining the association between income and health amongst the divorced population.

2) Lack in social resources

Generally, social support is known to buffer the chronic stress and the difficulties in everyday life. Evidence is quite strong for the hypothesis that lower income individuals are more negatively affected by given levels of stress (George, 1999; Mirowsky & Ross, 1989). A major reason for this vulnerability is that lower income people often show very limited size of social support networks. Divorce makes this process more severe, as divorce creates "ex-relationships" and role loss for divorced individuals. Many men and women feel cut off from the social activities or network they once enjoyed as a couple. Often, however, many don't have a framework ready for replacing those networks. In addition, when divorce occurs in middle age, which is known to be a bridge position, not only the social resources of the divorced couple shrink, but the social connections of other family members, children and elderly parent, also decline (Hagestad *et al.*, 1984).

As the social connection gets weak, some may turn to their own elderly parents for help or comfort. However, in middle age, most intergenerational support comes from adult children toward elderly fragile parents. This flow of support is even rare in poor families (Han & Han, 2004; Ok *et al.*, 2004). This implies even the social supports from the family of origin are hardly expected in midlife divorced families, especially with low income.

Beyond these private networks, other possible social connections can be built from work spheres. But most low income individuals tend to be unemployed and often face tough times with unstable job status (Ok, &

Sung, 2004; Ok *et al.*, 2004). Therefore, if health differences really exist among the post divorced income group, this can be explained by differences in their potential social resources.

3) Prospect for future marital status

It has been argued that because of their unstable financial condition, most of the divorced with fewer resources may feel trapped in their present circumstance and have no hope for the future. Particularly regarding their marital status, losing one's marital status implies going "solo" again (Marks, 1996). However, in reality, it is not easy for the poor divorced person to have the opportunity to get married again. If one is in his/her midlife, the chances of regaining marital status in the near future gets even smaller as the dating pool itself is very much limited in this developmental stage. In addition, lowered economic status obstructs reentering the marriage process, as the remarriage market, in particular, is characterized as having "severe competition" (Park & Be, 2005). In order to estimate the group differences and its outcome, it would be essential to examine the differences in future prospect or emotions toward the future. Very little work has been done on this subject. We know very little about whether the possibility of getting remarried differs by income groups and its impact on their health.

4. Control variables

We need to consider other social factors that might account for differences in the association between divorce, income and health. One important factor is gender. Previous studies have warned that post divorce life is more difficult economically for women who are divorced. Many reports of post divorce life described that the standard of living drops for a woman after a divorce while the standard life of men rises (Arendall, 1994; Bartfeld, 2000; Han, 1993a; Ok & Sung, 2004; Ross *et al.*, 1990). In Korea today, many middle-aged and older women take timeout from their jobs to care for

their children as well as for elder members of their families (Park, 2006). Those lost years in the labor market place women at a disadvantage. Therefore, when investigating the association of income group differences in post divorce life, gender differences can be a crucial factor.

Also, as we are looking at middle-aged divorced person in this study, the age boundary of middle-age is relatively large, ranging from the late 30's to the 50's. Family life stages or other life experiences may vary within these age groups (Ross & Wu, 1996). Therefore in this study, gender and age are used as control variables.

III. Research Methods

1. Sample

Data for this research comes from the BK Project sample (2005, see, Han *et al.*, 2005). The data was gathered from divorced middle-aged men and women living in the Seoul metropolitan area and the surrounding areas of Gyeong-gi Province. The sampling was carefully conducted to gather gender comparable data. Most of the sample interviewed have been divorced within the last 5 years and remained single. As for the random sampling, a professional research company was recruited. Trained interviewers visited each respondent's home and collected data by a face-to-face interview (response rate: 70%). From the original data (312 respondents), excluding the cases that had missing values or extreme responses (for example, extremely high incomes), 287 cases (women: 57.1%) were analyzed in this study.

2. Measures

In this study, health problems were evaluated in both physical and mental dimensions.

1) Physical health

Self-rated health (SRH) is measured to estimate the

overall physical health status. Self-rated health refers to an individual's global assessment of his/her health. Although this is a simple item to measure, it has been widely used in epidemiological studies (Spiro, 2000). Numerous works on health research have argued that there are strong association between objective health measures and SRH (Fillenbaum, 1979; Tessler & Mechanic, 1978, recited from George, 1999). More recent studies (Idler & Kasl, 1991) show evidence that SRH is a better predictor of mortality than chronic illness or functional status. With this background, we asked the respondents to rate their overall health status (ranging from ① poor to ⑤ excellent) in order to estimate physical health.

2) Mental health

The CDS-D (Center for Epidemiologic Studies Depression Scale: Radlof, 1977) is one of the commonly used scales for estimating depression and overall mental health. However, this scale was first developed in order to diagnosis clinical mental illness rather than daily experiences of depression. Testing this scale within a non-clinical sample, the distributions are mostly biased toward low depression (Mirowsky & Ross, 1989). Therefore, many general social surveys, for example the MIDUS (survey for Midlife Development of United States), selected six major depression episodes (including loneliness, sleeplessness, distraction, and negative mood.) from the CDS-D and revised it as short version of a depression scale. In BK Project data (2004), the size of the sample was much smaller compared to common general surveys. We adopted a depression scale which corresponds to MIDUS data. But items like "I feel blue", was excluded after a reliability test. We suspect that this particular question may well be less sensitive than others to Korean respondents. Finally four items were included to measure depression mood (Cronbach $\alpha = .80$) and each item was measured in a 1 to 5 Likert scale (range 4-20).

3) Financial change after divorce

We asked "how has your financial situation changed

after the divorce?" Their answers were classified into "better", "no change", and "worse." In the analysis we considered this item to be a dummy variable as "no change" in the reference group.

4) Social resources

With regards to social resources, employment status was used in order to examine connectedness to society. The size of social network was measured to estimate the amount of social support, which might buffer stressful situations after divorce. We asked for the number of significant others to whom the divorced can emotionally trust, provide economic and instrumental support.

5) Prospect for remarriage

To measure the prospect for their future marriage, two questions were asked regarding the hope for remarriage and the expectation for a romantic relationship. Each question was measured, using a 1-5 Likert. Higher result indicated a more negative prospect for their remarriage.

IV. Results

1. Characteristic of the sample

<Table 1> presents the respondents' characteristics. The sample included more women than men (57% women and 43% men). Up to 67% of respondents were in their 40's and 50's. Nearly 70% of the sample had

custody of their children at that time. In marital status, most of the respondents were still single; yet 3.5% of respondents reported they have intimate partners. As for monthly income, the income distribution amongst the divorced men and women was quite large. Nearly 25% of the respondents were identified to be below the poverty line, monthly income less than 1,000,000 won (approximately less than 1000 US dollars per month in that time), whereas, 8.3% reported a monthly income of more than 4,000,000 won (over 4000 in US dollars). In this study, *low income group* has an income level is below 1,000,000 won, and an income level with more than 4,000,000 won per month has been classified as *high income group*. And the others, whose income level is between 1,000,000 to 3,999,000 won is defined as *middle income group*.

2. Physical and mental health status of income groups

We used self-rated health and depression to measure health status of the divorced. Our analysis (see <Table 2>) showed that health differences do exist in terms of the income level. The higher income groups scored better in self-rated health while they scored lower in major depression symptoms than the lower income group. The low income group, however, was more likely to experience depressive moods and had tendencies toward bad physical health.

This shows that the low income group has a higher

<Table 1> Descriptive (n = 287)

Categories	Groups	Frequency (%)	Categories	Groups	Frequency (%)
Sex	Men	123(42.9)	Employment Status	Unemployed	21(14.3)
	Women	164(57.1)		Employed	246(85.7)
Age	35 and over	121(42.2)	Present Marital Status	Single	277(96.5)
	40's	125(43.6)		Living together	10(3.5)
	50's	36(12.5)	Average Monthly Income(won)	Less than 100	77(27.7)
	60's	5(1.7)		100-399	178(64.0)
Child custody	Self	171(69.2)	400 and over	23(8.3)	
	Ex-spouse	77(31.0)			

Notes: Sample size differs by variables because of missing responses.

<Table 2> Health Difference by Income Group

Health	Low Income (N = 77)	Middle Income (N = 178)	High Income (N = 23)	F
Depression	10.72(2.86)	10.26(2.41)	9.41(1.97)	2.06***
Self-Rated health	2.93(1.03)	3.42(.88)	3.35(.86)	7.00***

*** : p < .001

<Table 3> Income group's differences in health, financial change, social resources and prospect for remarriage

Categories		Low Income (N = 77)	Middle Income (N = 178)	High Income (N = 23)	Chi-squares/F
Financial Change	Better	9(11.7)	51(28.7)	10(43.5)	23.68***
	No change	16(20.8)	4(30.3)	9(39.1)	
	Worse	52(67.5)	73(41.0)	4(17.4)	
Employment Status	Unemployed	17(23.6)	7(4.0)	1(9.3)	24.07***
	Employed	55(76.4)	168(96.0)	22(95.7)	
Size of social Network		2.97(1.05)	3.19(4.17)	4.17(.72)	11.59***
Negative prospect for remarriage		6.26(2.21)	5.00(1.75)	4.64(2.31)	8.07***

Notes: 1) +: p < .10, *: p < .05, **: p < .01, ***: p < .001

2) Numbers represents average (standard deviation) for the continuous variables and frequency (percent) for the categorical variables. Among the categorical variables sample size differs by variables because of missing responses.

risk of health problems than the other income groups after divorce. This result is consistent with many previous research findings that higher income protects the individuals from the negative influences of divorce (Kinston & Morgan, 1990).

3. Explaining the health differentials by financial and social factors

In order to find out why a low income after getting a divorce is related with health risk, we examined whether the income groups experienced their financial and social changes differently (see <Table 3>).

As you can see in the <Table 3>, among the low-income group, 67% of the group declared that they had experienced drastic income shrinking, and only 11.7% said their economic situation turned out to be better after divorce. Whereas in the high-income group, most of the respondents reported that their economic condition got better or did not change, and only 17% declared their income had declined. This difference turned out to be statistically significant ($\chi^2 = 23.68, p < .001$). The result

reveals that it is the low-income group which had experienced a huge income loss after a divorce rather than other income groups. Unfortunately, as the survey did not cover the pre-divorce situation, we do not have the information regarding individuals' income level before the divorce process started. We are unaware of whether middle and upper classes had become post-low income group or if previously low income individuals suffered most of the disadvantage when getting a divorce. However, one thing is clear: the "post-divorce low income group" includes those who had experienced huge income losses, which was the big difference, compare to the other two groups.

The low-income group showed differences in their social resources. As you can see from the analysis, the percentage of unemployment is higher in the low-income group, reaching nearly a quarter (23.6%) of the total group, while in the middle or high income groups, the proportion was under 5% ($\chi^2 = 24.07, p < .001$). This infers that the low income group has weaker social connections than their counterparts. We also measured the number of significant others who could provide

support to estimate the amount of social resource. The size of social network was significantly different by income group. In low income group, the number of significant others who are able to provides support was less than 3 persons, while in high income group the average size of social network was more than 4 ($F = 11.59, p < .001$). The result showed that in the low income group, sources for social support are relatively small. This tells us that not only their income is unstable, but also it may be difficult for them to reach support systems that are known to provide proper support.

The different prospects for future marital status among the income groups were observed as well. When comparing the possibility of remarriage, the results show us that the low-income group responded more negatively than the high-income group regarding their future expectations about getting married once again ($F = 11.59, p < .001$). They also think that they have less chance of falling in love and committing to an intimate relationship ($F = 8.07, p < .001$). From this brief information, we can observe that higher income after divorce seems to have the advantage of expecting a better future. In summery looking at the difference in financial and

social factors by income, it seemed that this particular low-income group experienced most of the “downward mobility” after a divorce.

4. Relative influence of relevant factors on health differentials

In this next step, we are going to find out how these financial and social factors explain health differences by income groups. We begin our analysis with the regression of depression on income, and controlling socio-demographic variables. Then we added three social process variables respectively in orders: financial changes (as a dummy variable), social resources (employment status and size of social network), and negative prospects for remarriage. The same processes were conducted to analyze the relationship between income and self-rated health. Table 4 and Table 5 summarize the results of the overall analysis.

As shown in <Table 4>, which is consistent with the results we have observed in <Table 2>, people with low-income reported significantly higher depression symptoms than people with higher income status, but this time the difference holds after controlling gender and age.

<Table 4> Depression regressed by income and relevant variables (n = 271)

	Model 1		Model 2		Model 3		Model 4	
	b	β	b	β	b	β	b	β
Income	-.28	-.22**	-.21	-.17*	-.15	-.12+	-.12	-.09
Gender ^a	-.47	-.09	-.31	-.06	-.28	.00	-.20	-.01
Age	.58	.17**	.58	.17**	.59	.18**	.54	.16**
Financial Change ^b								
Worse			.54	.10	.51	.10	.52	.10
Better			-.01	-.03	-.04	-.01	-.08	.01
Job Status ^c					.62	.07+	.85	.10+
Size of Social Network					-.37	-.16**	-.26	-.12*
Negative Prospect for Remarriage							.42	.33**
(constant)		11.14**		10.38**		10.23**		8.42**
R-square		.07		.08		.11		.20
F-value		6.5***		4.3***		4.3***		7.3***

Notes: 1) +: $p < .10$, *: $p < .05$, **: $p < .01$

2) a: men = 0, women = 1

3) b: worse = 1, no change = 0, better = 0, better = 1, no change = 0, worse = 0

4) c: unemployed = 0, employed = 1

The mediating influences also performed as expected (see <Table 4>). The introduction of variables measuring financial changes, social resources and prospect for future marriage substantially decreased the coefficients of income. In model 2, although financial changes were not significantly associated with depression, it creates a slight increase in change in the R-square of model 2 and a decrease in the size of the coefficient of income. When social resource variables were considered in model 3, however, the coefficient of income was cut almost in half of its original score. As we go through model 4, adding the prospect for remarriage to the model, the coefficient of income for depression declined even more, reaching the non-significance level.

In the final model 4, the negative prospect of remarriage was the strongest factor that influenced post divorce depression ($\beta = .33, p < .01$), followed by the size of social network ($\beta = .12, p < .05$) and job status ($\beta = .10, p < .10$). This reveals that the difference in social resources and prospect for remarriage together play an important role in alleviating the impact of income on post divorce depression.

The results are very much alike in the regression model and in the self-rated health reports on income (see

<Table 5>). In model 1, even though the gender and age variables were considered, the effect of income on the self-rated health was significant. The higher the income status, the higher self-rated health levels were.

As the other independent variables are introduced in models 2, 3 and 4, respectively, not as dramatic as in the case of depression, the coefficient of income on self-rated health dropped, reaching a non-significant level. Employment status and prospects for remarriage were the significant variables to explain self-rated health in final model 4. Although financial change actually explained some of the portion of health differences by income, it was not significantly associated with self-rated health.

For the control variables, age turned out to be a significant variable in both depression and self-rated health. Aged divorced person had more health problems than younger person. Gender, was significant in the self-rated health dimension; more women than men have a higher possibility of bad physical health. Gender difference in regarding depression level was, however, not found in this research. It implies that, in the case of divorce, men and women were no different for the risk of depression after divorce.

<Table 5> Self-rated Health Regressed by Income and Relevant Variables (n = 270)

	Model 1		Model 2		Model 3		Model 4	
	b	β	b	β	b	β	b	β
Income	.07	.15*	.06	.14*	.06	.13+	.05	.11
Gender ^a	-.73	-.37**	-.73	-.38**	-.64	-.33**	-.47	-.24**
Age	-.29	-.23**	-.29	-.23**	-.28	-.22**	-.26	-.21**
Financial change ^b								
Worse			-.16	-.08	-.10	-.05	-.11	-.05
Better			.18	.08	.19	.08	.21	.10
Job Status ^c					.52	.17**	.46	.15**
Size of social Network					.04	.05	.03	.03
Negative prospect for remarriage							-.11	-.23**
(constant)		4.7**		4.8**		4.2**		4.7**
R-square		.19		.19		.22		.27
F-value		18.62**		11.56**		9.5**		10.6**

Notes: 1) +: $p < .10$, *: $p < .05$, **: $p < .01$

2) a: men = 0, women = 1

3) b: worse = 1, no change = 0, better = 0, better = 1, no change = 0, worse = 0

4) c: unemployed = 0, employed = 1

V. Discussion

The purpose of this study was to analyze the differences in the health status of the divorced population according to their income status and to explain the social process.

Before discussing these results in detail, it is important to note the limitations of this study. First, the association between income and health is theoretically open to a selection effect because the analysis is based on a cross-sectional research design. Having a low income restricts the individual's access to fundamental conditions required for good health, such as adequate housing, good nutrition, and the opportunity to participate in society. However, in the opposite direction, it is possible that poor health limits their chances of getting a higher income, in the end resulting in having a low income. Another limitation is that the analysis focused only on a subset of the major links between income and health of the divorced population and many other mediating factors, such as personal control and self-esteem, remain to be examined.

Despite of these limitations, this study tried to examine the association of income and health by studying specific cases of life change, changes that are largely overlooked in current health literature. By analyzing 287 midlife men and women divorced within the last 5 years, we could observe quite a large income distribution among divorced respondents and also strong physical health disparity. Even though getting a divorce creates huge stress and financial break down, not all divorced person has been affected by this negative effect of divorce to the same degree. An association between health and income status was found: having less income after divorce made the divorced more liable to depression and bad physical health.

We can expect that the disadvantages which followed the divorce process were very different depending on the context. Indeed, results from this study shows that it was the low income group that experienced most of the financial shake up, loss of social connections and had

less hope for remarriage after getting a divorce. Knowing that old age comes right after midlife, this result implies that differences in income and health may shape different settings and conditions for the divorced facing their aged period. The result suggests that careful surveillance is needed, not only of the family structure or the relational changes in divorced families, but also of health and social inequalities that divorce may produce.

In order to account for this health disparity between income groups, we tested relative influence among social factors. The result was that, among other factors, the health difference by income almost disappeared and an increase of the R-square was significant, as the social resource variables were considered. This suggests that the poor health status of the low income group is partly due to the lack in social resources. Therefore, when trying to relieve health inequality amongst income groups of the divorced population, especially those who are about to face the golden age, social resources seem to play a key role in this issue. However, questions like: "What type or source of support is effective to diminish this income gap, in this particular age? Will this effect of social support differ by income groups?" are still unanswered. Further studies and policy attention to this particular life stage is much needed.

Secondly, financial distress did not exert a significant factor on health in this study. Despite the contribution of an increment in the R-square of the model, and the relieving of health difference by income, it did not occur as a prominent factor in both physical and mental health dimensions. However, this does not mean that we can ignore the effect of the financial shock in the divorce process. We suspect that the process of losing financial resources itself may have some correlation between loss in social resource and negative expectations for the future. In this study, the high income group was less likely to experience huge income loss, and this was partly due to the fact that these people kept a larger support network and were able to maintain stable jobs. However, the low income group seems less able to wage the negative effect of divorce, as they were not efficient

in drawing upon their social and economic resources known to help the post divorce process. Therefore, identifying the association among the three factors is very much needed in further investigations. We also suspect that, as many previous studies have described, a time period effect took place. The respondents of the sample experienced divorce less than 5 years, though, still there is a possibility that most of the respondents had already coped with small incomes.

Lastly, the prospect for remarriage had a positive effect on the physical and mental health, even when income and other social process variables were controlled. This supports the idea that marital status is helpful for good health (Gove, Hughes, & Style, 1983; Ross *et al.*, 1990). Those with a negative expectation for remarriage and no hope for a new intimate partner had the tendency of being depressed and had a negative attitude about their physical health. The pessimistic prospect for remarriage can be reflected in depression and self-rated health condition, by raising the feelings of loneliness and uselessness, the drying up of energy to take health promoting actions. Therefore, even the hope for remarriage seems important for the divorced population to maintain their good health condition. The significance of positive prospects for the future implies important notions for research on health, as well. The relationship between income and health was mostly explained by experience of *the past*. We can say that previous studies of health omitted issues for the future. What people expect for their future should be accounted as an essential part in future studies on health.

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