



Having a Partner or Living with a Partner: Differences in Life Satisfaction and Mental Health

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Abstract

Using longitudinal data from Australia we compare the wellbeing effects of transitions both into and out relationships, using two different measures of wellbeing: life satisfaction and mental health. We distinguish between the formation, and ending of, three different types of relationships across three years: Living-apart-together (LAT), cohabitations, and marriages. For those in LAT relationships, we find they are quite distinct from other ‘single’ people. Starting, or ending, a LAT relationship has a significant impact on an individual’s wellbeing. We also find that transitions into relationships, and transitions out of relationships, do not have equivalent effects. Generally, moving from a relationship to being single had a more significant negative impact on life satisfaction and mental health, than moving into a relationship had a positive impact. These findings suggest that having an intimate partner, even one who is not co-resident, is related to higher levels of wellbeing compared to having no partner.

Keywords Relationships · Life satisfaction · Mental health · Marriage · Cohabitation

Introduction

In the last decade, the topic of wellbeing has moved into the mainstream as national policy makers strive to measure societal progress beyond GDP (OECD, 2023). While debate still ensues about how factors such as a person’s age or income relate to their wellbeing, another area that has recently received renewed attention is the effect of personal relationships and particularly marital status. There has long been

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a ‘comfortable consensus’ (Zimmermann & Easterlin, 2006) that married people are happier or more satisfied with their lives. However, as partnership patterns around the world develop and change, researchers are beginning to re-examine this consensus which was primarily built on early cross-sectional studies.

Marriage rates have declined, while the proportion of people cohabiting, or not living with a partner has increased. In Australia, between 1986 and 2021, among people aged 25–69, the per cent who were married fell from 72 to 52; the per cent cohabiting increased from 3 to 14, and the population not living with a partner or spouse increased from 25 to 33 per cent (Australian Bureau of Statistics, 2022). Given this increase in the popularity of cohabitation, much recent research has focused on whether cohabitation and marriage differ in terms of their enhancements, if any, to a person’s wellbeing. The increased availability of longitudinal data has also allowed the analysis of more sophisticated models that look at transitions into and out of cohabitation and marriage, and question whether it is relationships that make people happy or whether happier people are more likely to find a partner (Stutzer & Frey, 2006; Perelli-Harris et al., 2019).

There is now a large literature comparing the wellbeing of married and cohabiting individuals (Soons & Kalmjin, 2009; Musick & Bumpass, 2012; Hewitt et al., 2018; Perelli-Harris & Styr, 2018; Perelli-Harris, et al., 2019). In contrast to the volume of studies comparing the wellbeing of married and cohabiting individuals, much less is known about those who are in a relationship but are not living with their partner, commonly referred to as a ‘living-apart-together’ (LAT) relationship. In Australia about a quarter of those usually classified as ‘single’ are believed to have a non-cohabiting partner (Reimondos et al., 2011). Although living-apart-together (LAT) relationships differ fundamentally from cohabitation and marriage as they do not involve full-time co-residence, qualitative studies suggest that other elements of relationships such as intimacy, and social and emotional support are present in LAT relationships. However, we know very little about what effect being in a LAT relationship has on people’s wellbeing, and in particular how that compares to those who are married, cohabiting, or single (Eckermann, 2015).

A few studies use cross-sectional data to compare wellbeing of married, cohabiting, LAT and single (Ross, 1995; Dush & Amato, 2005; Soulsby & Bennett, 2015; Brown et al., 2022) but to date, only one study has used longitudinal data to examine transitions into LAT relationships and how that compares to transitions into cohabitation and marriage (Rapp & Stauder, 2020). Using data from the German Socio-Economic Panel, Rapp and Stauder (2020) tracked single, never married, respondents over time to investigate how mental and physical health changed as a result of entering a non-cohabiting, cohabiting or married union. In this paper, we expand on this by using longitudinal data to compare the wellbeing effects of transitions both into and out of LAT as well as cohabitation and marriage, using two different measures of wellbeing: life satisfaction and mental health. In addition, we also track the wellbeing of respondents who remain in the same relationship state over time.

Relationships and Wellbeing

There are many theoretical explanations as to why having a partner is related to wellbeing; these can be divided into resources such as social support and economic benefits, and identity and selection effects. Since most of the literature focuses on marriage, we outline the supposed benefits for marriage and what is known about the degree to which this might also apply to cohabitation and LAT.

Social Support

One of the most important benefits linked to wellbeing that is attributed to marriage is the companionship, social and emotional support spouses can provide each other (Waite & Gallagher, 2000). Ross et al. (1990) define emotional support as the sense of being cared about, loved, esteemed, and valued as a person. However, the companionship, love and intimacy benefits of a co-resident partner are not exclusive to marriage and could exist in any long-term relationship whether the couple is legally married or not. While LAT relationships are heterogeneous in nature, they can also involve a high degree of love, commitment, care and support for one another (Duncan et al., 2013; Carter et al., 2016; Broese van Groenou et al., 2019; Ševčíková et al., 2021). We therefore might expect them to be a major source of support, similar to cohabiting and married unions.

While single people do not have an intimate partner, they can have other strong interpersonal relationships which provide them with a sense of belonging and support (Oh, et al., 2022). Conversely people entering partnerships may experience ‘dyadic withdrawal’, which involves their friendship networks shrinking as they lose individual friends and their friendship networks overlap with their partners over time (Kalmjin, 2003). Although single people may have a strong network of friends and family it is unknown to what degree the support from friends and family differs from the support from an intimate partner (Adamczyk, 2016).

Economic Benefits

Marriage is also thought to provide economic benefits such as economies of scale. A married couple can get by with fewer goods (such as one set of appliances instead of two) than if they lived separately, and there are also economies of scale when it comes to producing household goods such as meals or clean clothes (Ribar, 2004). Married couples can also pool their income and accumulate wealth more rapidly (Amato, 2015). To the extent that a better financial position contributes to higher wellbeing, we might also expect unmarried cohabiting couples to gain the same advantages as married people from sharing a household and the costs associated with this. They would enjoy all the same economies of scale as their married peers, although evidence suggests they are less likely to pool their incomes and function

as a single economic unit particularly where cohabitation is not constrained by tax systems or economic disadvantage (Evans & Gray, 2021).

Those without a co-resident partner may live with someone else, including their own family members or friends, and can therefore also benefit from economies of scale. For example in Australia, 76 per cent of people aged 18–65 who were not cohabiting or married, lived with other people, including in group households or with other family members (Australian Bureau of Statistics, 2019).

Social Identity

Marital status is an important determinant of how people are perceived by others and how people perceive themselves. Being in a committed relationship is thought to enhance wellbeing by providing people with a strong identity and sense of self-worth (Dush & Amato, 2005). At the same time if there is a strong social norm to be partnered, or to be married, people not in a partnership may have lower levels of wellbeing due to social sanctions or disapproval and also because they tend to internalize these social norms and adopt them as individual standards, by which they judge themselves (Stavrova & Fetchenhauer, 2015). Thus, the particular cultural expectations for romantic relationships are likely powerful influences on the link between intimate relationships and wellbeing (Kansky, 2018).

Evidence for the importance of social norms on mediating the link between relationship types and wellbeing comes from comparative studies which suggest that the gap in wellbeing between married and cohabiting people varies across countries and is smaller in places where cohabitation is more socially accepted as an alternative to marriage (Soons & Kalmjin, 2009). Similarly for childbearing within cohabitation, Stavrova and Fetchenhauer (2015) also find that in countries where childbearing within cohabitation is more prevalent and socially sanctioned there is little difference in wellbeing between cohabiting and married parents. However, in comparing the relationship between relationship status and wellbeing across 45 European countries, Verbakel (2012) found no strong evidence that the normative climate or level of familism in different countries was related to well-being gaps across countries.

For single people with no partner, there appears to be a ‘cultural lag’ (Byrne & Carr, 2005) and they are often negatively stereotyped as immature, insecure, self-centred, unhappy or lonely (DePaulo & Morris, 2006; Slonim et al., 2015; Stavrova & Fetchenhauer, 2015; Day, 2016). Qualitative interviews suggest that those in LAT relationships can also encounter negative perceptions or stigma due to the non-normative nature of their relationships (Kobayashi et al., 2017).

Selection

Another dominant explanation regarding the link between wellbeing and relationships, centres on selection and reverse causality. People may have different unobservable characteristics associated with higher wellbeing which selects them into a relationship, or a particular kind of relationship. For example, people who have higher levels of wellbeing and are happier might be more likely to find a partner or

get married. Different statistical techniques have been used to try and disentangle some of the selection effects including instrumental variables, or longitudinal data with fixed or random effect (Ribar, 2004), twin studies (Kohler et al., 2005), or controlling for childhood characteristics (Perelli-Harris & Styrac, 2018; Perelli-Harris et al., 2019).

While there is some evidence from these longitudinal studies which provides support for selection (Mastekaasa, 2006; Soons & Liefbroer, 2008; Stutzer & Frey, 2006; DeMaris, 2018), studies also find that marriage, and to a lesser extent, cohabitation, are causally related to an increase in wellbeing (Zimmermann & Easterlin, 2006; Amato, 2015; DeMaris, 2018). Hence, while selection effects do play a role in the positive association of being in a relationship and wellbeing, being in a relationship also provides a setting which enhances wellbeing, at least in the short term.

Gender Differences

There is a persistent view which stems from early research that posited a difference between 'his' marriage and 'her' marriage; that is, men gain more from marriage than women do, including on measures of mental health and wellbeing (Bernard, 1972; Gove, 1972), due to gendered cultural expectations (Loscocco & Walzer, 2013). Although this notion remains influential, recent research finds mixed evidence for gender differences in the effect of marriage on wellbeing (de Vaus, 2002; Amato, 2015; Rapp & Stauder, 2020). This research suggests that the link between wellbeing and having a partner, is stronger for men with men having smaller support networks in general, and relying more on a romantic partner appears as their primary source of perceived social support (Dykstra & Fokkema, 2007; Stronge et al., 2019).

With regard to gender differences in other types of relationships apart from marriage, one recent study from Germany, found that women's mental health improved after establishing a LAT relationship but did not significantly change after cohabitation or marriage, whereas for men only marriage was associated with an improvement in mental health (Rapp & Stauder, 2020). A positive benefit of marriage for men was also found by Yucel and Latshaw (2022), where middle-aged and older men in LAT relationships had worse mental health than married men. In Germany, Preetz (2022) found that the dissolution of a non-cohabiting relationship led to significant declines in mental health and life satisfaction for men but women only experienced a decrease in life satisfaction and recovered more quickly.

Different Measures of Wellbeing

Part of the reason for mixed results from many previous studies on wellbeing and relationships is the use of different measures of wellbeing (Kalmjin, 2017). Previous literature has employed a large range of measures including depression, suicidal ideation, mental health indices, as well as life satisfaction. When life satisfaction and mental health measures are both included, life satisfaction appears to be more affected than actual measures of mental health (Kalmjin, 2017; Blekesaune, 2018).

A plausible explanation is that life satisfaction is a global measure of evaluative or cognitive wellbeing (Dolan et al., 2011), which is affected by societal norms and expectations. As marriage is still seen as an important goal or marker for many people, those who are not married may evaluate their life in a more negative way in relation to their own and to society's expectations (Kalmjin, 2017). In contrast mental health is a measure of hedonic or affective wellbeing which captures mood or feeling within a specific time period, and is less influenced by external comparisons. In this paper, we include both measures to test these different approaches.

Research Questions

Does Transitioning in to or Out of a LAT Relationship Have a Similar Effect on Life Satisfaction as Transitioning in to or Out of a Cohabitation or Marriage?

Based on social identity theory we would expect an increase in life satisfaction entering a LAT relationship due to the strong social norms and expectations to have a partner, but due to lack of institutionalization in LAT relationships it would not be as strong as the effect of cohabitation and marriage. For the same reason we would expect exiting a LAT relationship to lead to a decrease in life satisfaction, but for the magnitude of the decrease to be less than for those who exited a cohabitation or marriage (Hypothesis 1).

Does Transitioning in to or Out of a LAT Relationship Have a Similar Effect on Mental Health as Transitioning in to or Out of a Cohabitation or Marriage?

Based on previous studies we would expect entering a LAT relationship to have a similar effect on mental health as cohabitation and marriage, as this is less affected by social norms. Ending a relationship however would have a greater negative effect on mental health of those previously married or cohabiting compared to LAT due to the extra complexities and stressors associated with a residential breakup (Hypothesis 2).

Further, based on previous, at times contradictory differences by gender we test for gender differences for each hypothesis.

Data & Method

Data

The data come from five waves of the Household, Income and Labour Dynamics in Australia (HILDA) survey. HILDA is a large-scale nationally representative longitudinal panel study that is conducted on an annual basis and interviews all members of a household aged 15 and over. Data from waves 2005, 2008, 2011, 2015 and 2019 included questions on LAT relationships as part of Australia's participation

in the international Gender and Generations Survey (GGS); a cross-national longitudinal survey coordinated by the Population Activities Unit of the United Nations Economic Commission for Europe. The question asks respondents who were not married and not living with a partner, whether they were in an intimate ongoing relationship with someone they were not living with.

The sample includes people from age 25 to 69, who were present for at least two of the selected years. This selection was based on the assumption that those under age 25 are most likely to be in transitory LAT relationships (Evans, 2015). Similarly, after age 69 very few people were found to be in a LAT relationship and also there is a higher chance of widowhood. In measuring relationship exits, we excluded those transitions out of relationship which were due to the death of the partner.

Transitions into and out of relationships were examined over each pair of consecutive waves, with a gap of 3 years between each wave. Our final sample size is 12,502 respondents measured across 42,962 person years and resulting in 30,006 relationship transitions.

Outcome Measures

Life satisfaction is measured from a question which asks, “*How satisfied are you with your life?*” The answer scale has 11 points scale ranging from 0 (totally dissatisfied) to 10 (totally satisfied).

Mental health is measured using a scale created from five questions which asked if in the past 4 weeks the respondent felt: (1) they had been a nervous person, (2) felt so down in the dumps that nothing could cheer them up, (3) felt down, (4) felt they had been a happy person, and (5) felt calm and peaceful. The answer categories ranged from 1 indicating ‘all of the time’ to 6 indicating ‘none of the time’. The last two items were reverse coded so that a higher answer category indicated better mental health. The five items were combined to provide one summary scale for each dimension (with a resulting reliability score of Cronbach’s alpha 0.85).

For ease of comparability both the life satisfaction and mental health measure were standardized to have a mean of zero and a variance of 1.

Relationship type

The main independent variable of interest is the relationship transition between each wave, which is categorised as movements into and out of being single, LAT, cohabiting and married as shown in Table 1. Due to the small number of cases that went from single to married over 3 years ($N=106$), these were combined with single to cohabiting. We also exclude a small number of transitions that were from cohabiting or married to LAT as our primary interest is examining transitions into or out of relationships, or staying in the same relationship type.

Other factors known to be related to wellbeing are also included in our models. Measures such as life satisfaction are known to vary considerably by age (Frijters & Beaton, 2012). We also account for age using four categories: 25–29, 30–39, 40–49, 50–59, 60–69. Other factors included are changes in whether the person has children or not, changes in their employment situation and changes in self-assessed prosperity

Table 1 Distribution of relationship transitions by sex

Transition	Men	Women	Total
No change			
Single to single	1,771	2,781	4,552
LAT to LAT	220	251	471
Cohabiting to cohabiting	1,463	1,507	2,970
Married to married	8,323	9,168	17,491
Start or strengthen relationship			
Single to LAT	266	326	592
Single to cohabiting/married	332	333	665
LAT to cohabiting/married	287	347	634
Cohabiting to married	629	586	1,215
End relationship			
LAT to single	215	248	463
Cohabiting to single	176	194	370
Married to single	244	339	583
Total	13,926	16,080	30,006

HILDA, 2005, 2008, 2011, 2015, 2019

as these have all been shown to also influence wellbeing (O'Leary et al., 2020). We also control for whether or not the individual had experienced each of the following life stressors in the previous year: serious personal injury/illness, serious injury/illness to family member, death of a close relative/family, death of a close friend, or having been a victim of physical violence.

Method

The five waves of data are pooled into a long format to observe possible relationship transitions across four time periods, from 2005 to 2008, 2008 to 2011, 2011 to 2015, and 2015 to 2019. For each relationship transition we start with a bivariate analysis (t-test) to compare changes in life satisfaction and mental health between one wave and the next wave 3–4 years later. Following the method used by Josefsson et al. (2018) we then use a fixed effects model to examine the relationship between the outcome variables (life satisfaction and mental health) and changes in the independent variables with the key focus being relationship transitions. Fixed effects model control for all time-invariant differences between individuals, including unobserved characteristics such as personality differences which may impact on our outcome measures of life satisfaction and mental health. The appropriateness of using a fixed effects model, as compared to a random effects model, was confirmed with a Hausman test.

The fixed effect regression equation can be written as:

$$Y_{it} = \beta_1 X_{1,it} + \dots + \beta_k X_{k,it} + \alpha_i + u_{it}$$

Where Y_{it} represents the dependent variable (life satisfaction or mental health score) for individual i at time t ; $X_{1,it}$ represents the first independent variable for person i , at time t and β_1 is the coefficient for this variable. Relationship transition is coded as a series of dummy variables presenting each possible transition from the previous wave to the current wave, e.g. single to LAT, LAT to single, married to single etc. The unknown intercept for each person is presented by α_i , and u_{it} indicates the error term.

The modelling is conducted separately for men and women.

Results

Bivariate Results

Figure 1 shows how people’s life satisfaction and mental health changed across waves based on the relationship transitions they experienced. The values for the associated T-test can be found in Appendix Table 2.

The categories of relationship change are ordered starting with those who remained in the same relationship state (e.g. married, cohabiting, LAT, or single) across the two time periods, followed by those who either moved into a relationship

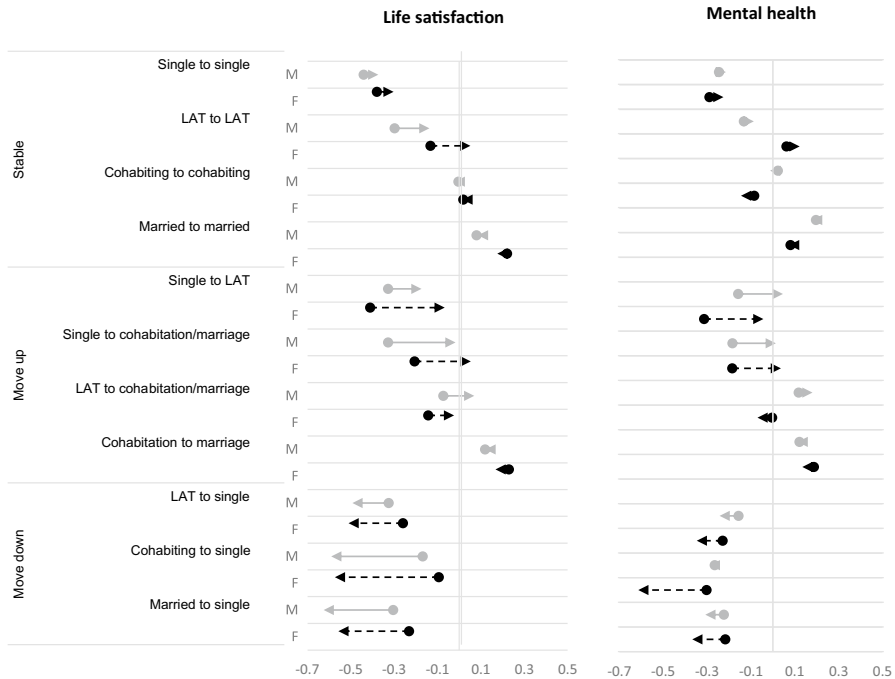


Fig. 1 Change in life satisfaction and mental health by relationship transition and sex

or who were initially cohabiting and then married. Finally, we have the people who experienced a relationship breakdown and left a LAT, cohabiting or married union.

As expected, those who remained in a stable state experienced minimal change in life satisfaction or mental health. Only those who stayed in a LAT relationship showed a significant increase in life satisfaction, and this was the case for both men and women.

In contrast, for both men and women, entering a relationship was associated with increased life satisfaction. This increase was observed for LAT as well as cohabitation/marriage. Moving from a LAT to cohabiting was also associated with a small positive increase in life satisfaction, but a move from cohabitation to marriage was not significantly associated with any changes in this measure.

Changing from cohabiting/ married in one wave to single 3–4 years later, was associated with a decrease in life satisfaction for both men and women. Exiting a LAT relationship had a slightly smaller but still substantial associated decline in life satisfaction. We observe that, for those who transition from a LAT, cohabitation or marriage to being single, their life satisfaction is in many cases much lower to begin with, compared to their peers who stayed partnered.

In contrast to life satisfaction, changes in mental health are less pronounced overall. As with life satisfaction, most of the change is seen for those who either start a relationship or end one. For men, going from single to LAT or single to cohabiting/ married is associated with an increase in mental health, but surprisingly exits from a cohabitation has no significant effect, and leaving a marriage also only has a relatively small negative effect. This could be due to the fact that men in cohabitations or marriages which ended, had poor mental health to start with. For women, there was more variation in mental health. Women who were initially single show an improvement in mental health when they remain single, and an even greater improvement if they start a LAT or cohabitation/marriage. Women who stayed in a cohabitation, or who dissolve a cohabitation or marriage also experience a significant decline in mental health.

Multivariate Results

When a person enters or exits a relationship, there are also many other associated life changes that could be occurring which could potentially also influence wellbeing. The multivariate results of the fixed effects regression are shown in Appendix Table 3. This table presents the coefficients for how relationship transitions occurring between the previous wave and the current wave, effect life satisfaction and mental health. The reference category for the relationship transition dummies is those who were single at both time points.

To illustrate how the different relationship transitions compare, Fig. 2a and b shows the predicted life satisfaction and mental health, respectively controlling for the other variables in the model. Overall, with some exceptions, the multivariate results largely reflect the results shown previously from the bivariate t-test indicating

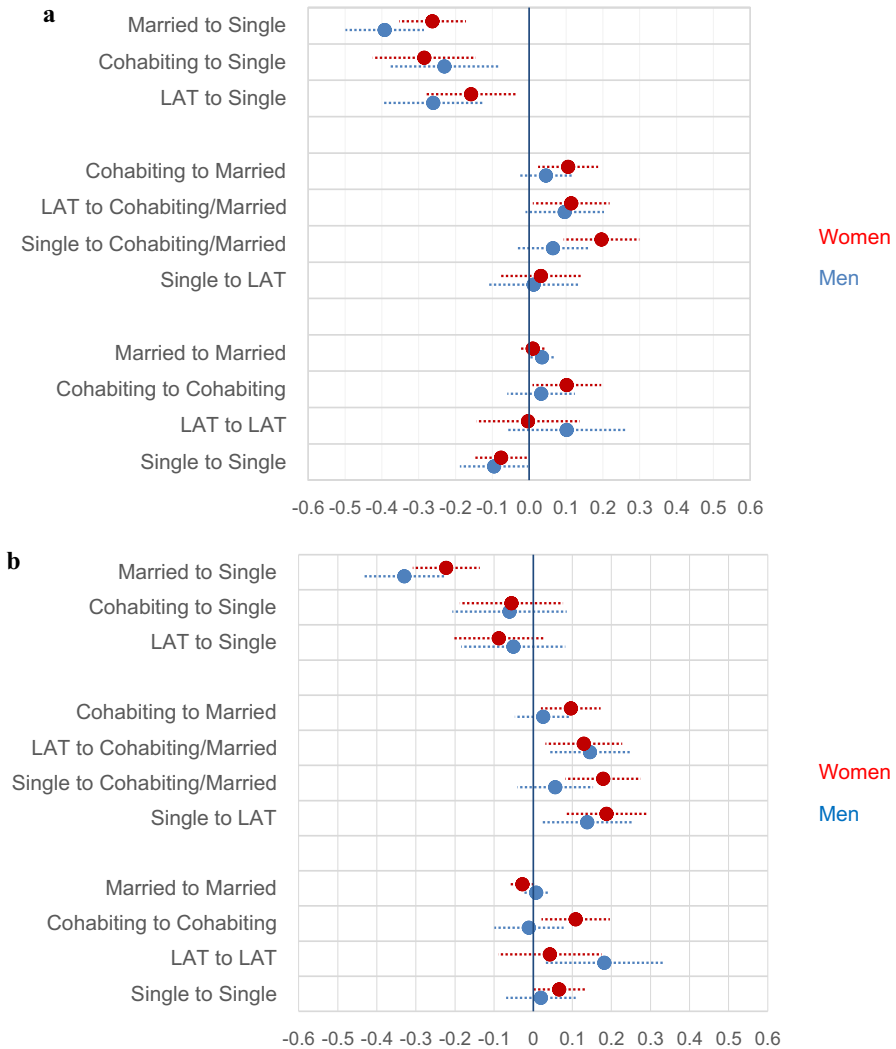


Fig. 2 **a** Predicted life satisfaction between T and T + 3 by relationship transition and sex with 95% confidence intervals. **b** Predicted mental health by relationship transition and sex 95% confidence intervals

that changes in the number of children or finances which could be associated with relationship transitions are not the primary determinant of the changes.

For both sexes, experiencing a relationship dissolution was associated with lower life satisfaction. For men, the dissolution of a marriage had a stronger effect than the dissolution of a cohabitation or a LAT. In contrast, for women, marriage and cohabitation dissolutions both had a stronger negative effect compared to LAT dissolutions. However these differences between the different types of relationship dissolutions were not statistically significant at the 5% level.

A move from one relationship type to a more ‘committed’ one, for example, from cohabitation to marriage, or LAT to cohabitation was associated with higher life satisfaction for both men and women. Transitioning from single at time 1 to a cohabitation 3 years later, was associated with higher life satisfaction, particularly for women. Interestingly, after controlling for the other variables, entering a LAT relationship had no significant impact on life satisfaction for either gender.

Remaining in the same relationship status between two waves was, as predicted, not associated with any major changes in life satisfaction, although people who were single at both time points experienced a small decline.

For mental health again we see much less variation compared to life satisfaction. However, one difference we find is that while transitioning from single to LAT had no significant effect on life satisfaction, it did have a significant positive effect on mental health. Another difference is that a marriage dissolution was associated with a stronger mental health decline for both sexes, compared to the dissolution of a cohabitation or LAT.

Discussion

In this paper we contribute to the understanding the association between relationships and wellbeing, with a special focus on LAT relationships. For those in living-apart-together relationships, a primary finding of this paper is that they are quite distinct from other ‘single’ people. Although in official statistics those who do not live with their partners are classified as single, the findings show that they are different in many respects, and in some ways look much more like a person in a marital or cohabiting relationship.

We find that transitions into relationships, and transitions out of relationships, did not have equivalent effects. Generally, moving from a relationship to being single had a more significant negative impact on life satisfaction and mental health, than moving into a relationship had a positive impact. Our results also indicate that in studies of wellbeing and relationships, findings are quite sensitive to the type of measure used.

In terms of life satisfaction, for example, entering a LAT relationship was not associated with any significant improvement for either men or women, however, the dissolution of a LAT relationship had a negative impact. In comparison to marriage and cohabitation dissolutions, LAT dissolutions were almost equivalent to cohabitations for men, but less impactful for women.

Transitions out of relationships did not have as great impact on mental health, except for the case of marriage dissolutions which had a negative impact on both men and women. In contrast, transitioning from cohabitation to being single, or LAT to single, had less impact on mental health.

In contrast, while forming a LAT relationship had no significant impact on life satisfaction, it was associated with a positive impact on mental health for both sexes. For women, the positive impact on mental health of forming a LAT relationship was equivalent to forming a cohabitation/marriage.

We also find that those in a relationship who, three years later, reported their relationship status as single had lower levels of life satisfaction and mental health before separating than their peers who stayed in a relationship. This finding is in line with results from Hewitt et al. (2018) who show that lower levels of wellbeing can already be observed among couples in the years before they break up, compared to couples who stay together. After exiting their relationships the two measures declined further. It is possible that their low levels of wellbeing were due to the poor relationship quality, or that their low levels of wellbeing caused poor relationship quality, or a combination of both.

These findings are in line with the small number of studies in this area which suggest that having an intimate partner, even one who is not co-resident, is related to higher levels of wellbeing compared to having no partner (Ross, 1995; Dush & Amato, 2005). In this paper we are unable to test to what extent this is related to social norms in how people perceive themselves, however we believe this is likely to be an important part of the story. If we consider a hypothetical society where the majority of people were single, where being single was a highly valued identity, and married people were considered non-normative, we might expect that single people would have higher life satisfaction than married people.

One limitation of this study is that our category of 'single' people includes people with heterogeneous experiences in terms of past relationships. Due to small numbers we do not distinguish between those who have had different experiences for example, having never been in a relationship previously or perhaps already widowed or divorced. We also capture relationship status only at two time points for each pair of waves, in other words, if someone was single both at time T and T + 3 we do not take into consideration that they may have had a relationship that started and ended between these two times. Similarly, for people in relationships, we do not consider if they are with the same partner or not. Someone who is married at time T and T + 3 may have a different spouse at the two time points, having divorced and remarried.

As the rate of people not living with a partner increases, more research is focusing on single people and their wellbeing. Given these differences on a range of measures between LATs and other 'single' people, we suggest that where possible it is preferable to distinguish between LATs and single people in research in order to better understand the lives of single people. This research clearly demonstrates that for wellbeing, an analysis which includes LATs with singles would overestimate the true levels of wellbeing for singles.

Appendix 1

Table 2 T-test results

	Men			Women				
	Life satisfaction			Pr(T > T T + 3)	T + 3	Change	Pr(T > T + 3)	
	T	T + 3	Change					
Single to single	-0.44	-0.38	0.07	**	-0.36	-0.28	0.08	***
LAT to LAT	-0.30	-0.14	0.16	**	-0.12	0.04	0.16	**
Cohabiting to cohabiting	0.00	-0.02	-0.02		0.03	0.02	-0.01	
Married to married	0.08	0.09	0.01		0.17	0.15	-0.02	*
Single to LAT	-0.33	-0.17	0.15	**	-0.33	-0.11	0.22	***
Single to cohabitating or married	-0.33	-0.02	0.31	***	-0.29	0.07	0.36	***
LAT to cohabiting	-0.07	0.07	0.14	**	0.00	0.11	0.12	**
Cohabiting to married	0.12	0.12	0.00		0.24	0.19	-0.05	
LAT to single	-0.35	-0.51	-0.16	**	-0.23	-0.41	-0.18	**
Cohabiting to single	-0.17	-0.59	-0.42	***	-0.11	-0.54	-0.43	***
Married to single	-0.33	-0.66	-0.33	***	-0.23	-0.43	-0.20	***
	Mental health							
Single to single	-0.24	-0.22	0.03		-0.29	-0.24	0.05	***
LAT to LAT	-0.13	-0.05	0.08		0.06	0.04	-0.02	
Cohabiting to cohabiting	0.02	-0.01	-0.04		-0.08	-0.14	-0.06	**
Married to married	0.19	0.17	-0.02	**	0.08	0.06	-0.02	*
Single to LAT	-0.16	0.01	0.16	***	-0.31	-0.10	0.21	***
Single to cohabitating or married	-0.18	-0.05	0.14	***	-0.26	-0.11	0.16	**
LAT to cohabiting	0.12	0.13	0.01		0.00	-0.09	-0.08	*
Cohabiting to married	0.18	0.15	-0.03		0.06	0.02	-0.04	
LAT to single	-0.17	-0.26	-0.09	*	-0.22	-0.39	-0.17	***
Cohabiting to single	-0.26	-0.39	-0.13	*	-0.31	-0.63	-0.32	***
Married to single	-0.23	-0.36	-0.13	**	-0.22	-0.36	-0.14	**

$p > 0.10 = *$, $p > 0.05 = **$, $p > 0.01 = ***$

Table 3 Fixed effects regression results

	Life satisfaction		Mental health	
	Men	Women	Men	Women
Relationship change				
Single to single (reference)				
LAT to LAT	0.21**	0.07	0.19**	-0.04
Cohabiting to cohabiting	0.12*	0.17***	-0.04	0.03
Married to married	0.13**	0.08	-0.01	-0.10**
Single to LAT	0.12**	0.10*	0.13**	0.11**
Single to cohabitation or marriage	0.16**	0.27***	0.04	0.11**
LAT to cohabitation or marriage	0.20***	0.18***	0.13**	0.06
Cohabitation to marriage	0.14**	0.17***	0.00	0.02
LAT to single	-0.15**	-0.09	-0.06	-0.15**
Cohabiting to single	-0.14*	-0.21***	-0.08	-0.13*
Married to single	-0.30***	-0.18***	-0.35***	-0.29***
Age group				
25–29 (reference)				
30–39	0.02	-0.01	0.02	-0.08
40–49	0.03	0.01	0.04	-0.14**
50–59	0.11	0.08	0.03	-0.16**
60–69	0.24***	0.20***	0.12	-0.10
Children				
Had children, no additional born (reference)				
No children both waves	0.20***	-0.01	0.24***	-0.07
Became a parent	0.14***	0.03	0.20***	-0.01
Had more children	-0.01	-0.06*	0.01	-0.04
Employment change				
Employed both waves (reference)				
Unemployed to employed	0.02	0.02	0.00	-0.01
Employed to unemployed	-0.04	-0.04	-0.05*	-0.11***
Unemployed both waves	-0.04	-0.06*	-0.15***	-0.13***
Financial prosperity				
Better	0.08***	0.07***	0.04**	0.07***
Same (reference)				
Worse	-0.14***	-0.10***	-0.11***	-0.06***
Experienced personal injury/illness				
No (ref)				
Yes	-0.15***	-0.18***	-0.26***	-0.22***
Experienced serious injury/illness to family member				
No (ref)				
Yes	-0.05**	-0.06***	-0.09***	-0.10***
Experienced death of close relative/family member				
No (ref)				
Yes	-0.02	-0.02	-0.06***	-0.09***

Table 3 (Continued)

	Life satisfaction		Mental health	
	Men	Women	Men	Women
Experienced death of close friend				
No (ref)				
Yes	-0.01	0.01	-0.06**	-0.02
Victim of physical violence				
No (ref)				
Yes	-0.16*	-0.26***	-0.12	-0.24***
Constant	-0.20**	-0.08	-0.02	0.29***

$p > 0.10 = *$, $p > 0.05 = **$, $p > 0.01 = ***$

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Declarations

Competing Interests The authors have no competing interests to declare that are relevant to the content of this article.

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