MELBOURNE INSTITUTE Applied Economic & Social Research

Working Paper Series Intermarriage on subjective social status and spousal dissimilarity in life satisfaction of co-resident heterosexual South African couples

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Working Paper No. 03/21 January 2021



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Abstract

The aim of this study is to determine how intermarriage on subjective social status is associated with spousal dissimilarity in overall life satisfaction in co-resident heterosexual couples in South Africa. Previous research suggests that intermarriage puts marriages and relationships at risk of dissolution and so too does spousal dissimilarity in subjective wellbeing. To our knowledge, the association of intermarriage with spousal dissimilarity in subjective well-being has not been explored in the literature. We apply fixed effects regression models to a sample of 8,918 married and cohabiting dyads constructed from the longitudinal and nationally representative South African National Income Dynamics Study. There is no spousal dissimilarity in overall life satisfaction under pure homogamy. In wife advantaged and currently hypogamic relationships females are more satisfied with life than their male partners, whereas the opposite is true in husband advantaged and currently hypergamic relationships as well as in wife exchanges. Intermarriage on subjective social status may put marriages and relationships at risk of dissolution due to its association with spousal dissimilarity in overall life satisfaction. Further research is required to present a more complete and integrated account of how spousal dissimilarity in subjective well-being may mediate the impact of intermarriage on the dissolution of unions and relationships.

JEL classification: I31, J12, Z13

Keywords: Subjective social status; intermarriage; life satisfaction; South Africa

INTRODUCTION

Intermarriage, defined as marriage between people from different social groups, races or religions, is an important aspect of social stratification systems (Schwartz, Zheng, & Xie, 2016; Van Leeuwen & Maas, 2010). Studies on intermarriage conducted in developing country contexts, however, are few and generally focus on the assimilation of immigrants in developed countries (Dribe & Lundh, 2008; Meng & Meurs, 2009) or focus exclusively on ethnic intermarriage (Utomo, 2020). One exception is Borkotoky and Gupta's (2016) study of intertemporal patterns in educational homogamy in India. There is ample scope therefore to advance research on intermarriage insofar as the developing world is concerned.

Early studies of intermarriage have generally focused on three sets of research questions, namely the investigation of the determinants of intermarriage, of geographical and intertemporal patterns in intermarriage, and of the consequences of intermarriage (Barron, 1951). The main focus has been on religious and ethnic intermarriage and its consequences. Examples of the diverse avenues of research include questions on how such intermarriage has impacted decisions regarding childbearing (Bean & Aiken, 1976), marital satisfaction and stability (Dominguez, De Santiago, García-Mateos, & Jenaro, 2019; Heaton & Pratt, 1990), and what the implications have been for women's standing (Chen & Takeuchi, 2011). Another avenue of research studies the implications of ethnic intermarriage for children's school achievement, social contacts and cultural values, and social integration (Kalmijn, 2010; Kalmijn, 2015). Most important in our context is that intermarriage and the resultant social heterogamy has been found to increase the risk of marital dissolution (Clarkwest, 2007; Kalmijn, De Graaf, & Janssen, 2005; Mäenpää & Jalovaara, 2014; Tzeng, 1992) which often holds detrimental consequences for both partners, but especially for women and children (Amato, 2000; Braver & Lamb, 2013).

BACKGROUND

Only very recently has the attention of researchers shifted to the consequences of intermarriage for the subjective well-being of spouses (Chen, 2018; Potarca & Bernardi, 2020; Qian & Qian, 2015). The interdependency of spousal well-being has been documented in various studies for countries such as India (Shakya, 2015), Britain (Powdthavee, 2009), the United States (Bookwala & Schultz, 1996), Norway (Gustavson, Røysamb, Borren, Torvik, & Karevold, 2016), South Africa (Posel & Casale, 2015) and a study of nineteen European countries (Bourassa, Memel, Woolverton, & Sbarra, 2015). In Germany, this similarity in life satisfaction has been found to on average decline over time and dissimilarity in life satisfaction to result in lower satisfaction with family life (Schade, Hülür, Infurna, Hoppmann, & Gerstorf, 2016). A longitudinal study from Seattle however found spousal similarity in happiness to be relatively stable (Hoppmann, Gerstorf, Willis, & Schaie, 2011). These similarities and differences in subjective well-being matter not only because it affects choices on childbearing (Aassve, Arpino, & Balbo, 2016), but because such dissimilarity has also been shown to predict divorce and the termination of partnerships (Guven, Senik, & Stichnoth, 2012; Powdthavee, 2009). The latter empirical evidence provide support for the so-called homogamy hypothesis, which argues that marriages or relationships in which partners share similar characteristics are more likely to not dissolve compared to marriages or relationships with dissimilar partners. Where partners share similar values and expectations the potential for conflict is less, which reduces the chance of dissolution (Kippen, Chapman, Yu, & Lounkaew, 2013). In fact, one could argue that spousal dissimilarity in life satisfaction may be the mechanism or conduit through which intermarriage has a greater likelihood of translating into dissolution. To make such argument, one would need to establish whether there is an association between intermarriage and spousal dissimilarity in subjective well-being. This has not been attempted in the literature, although a handful of studies have explored how intermarriage may impact individual spouse's levels of subjective well-being (Chen, 2018; Keizer & Komter, 2015; Potarca & Bernardi, 2020; Qian & Qian, 2015).

Stratification sociologists generally use occupation as the common coin of comparison in studies of intermarriage (Van Leeuwen & Maas 2010). Yet, the theories of relative deprivation (Crosby, 1976; Davis, 1959; Merton & Rossi, 1968; Runciman, 1966; Stouffer, Suchman, Devinney, Star, & Williams, 1949) and social comparison (Bernstein & Crossby, 1980; Corcoran, Crusius, & Mussweiler, 2011; Festinger, 1954) posit that one's ranking in the social hierarchy is related to one's life satisfaction, which is confirmed in the literature, with higher life satisfaction being associated with higher subjective social status (Haught, Rose, Geers, & Brown, 2015; Huang et al. 2017; Tan, Kraus, Carpenter, & Adler, 2020; Zhang, Wang, & Chen, 2011). As such, it may be more appropriate to measure intermarriage against subjective social status rather than occupation. In developing countries, moreover, standard occupational classifications offer a less clear picture of social class given that large parts of the population are poorly educated and do not work.

We focus on South African couples. A developing country such as South Africa is of particular interest, given that the great degree of social inequality that exists here (Francis & Webster, 2019) provides greater opportunities for intermarriage on social class than in most developed countries. Our primary research objectives are three-fold. First, we quantify the extent of spousal dissimilarity in overall life satisfaction among co-resident heterosexual South African couples. Second, we quantify the patterns of intermarriage observed in these couples based on subjective social status. Next, we examine how these patterns of intermarriage may impact levels of spousal life satisfaction and, specifically, spousal dissimilarity in life satisfaction. As part of our secondary research objectives, we investigate the degree to which spousal dissimilarity in overall life satisfaction is associated with gender roles, relationship characteristics and various forms of socio-demographic and psycho-social heterogamy.

The main contribution of this work lies in the adoption of Schwartz et al.'s (2016) typology of intermarriage to elucidate the link between intermarriage and subjective well-being. Specifically, Schwartz et al.'s (2016) typology allows the incorporation of status exchange marriages, which is a specific pattern of intermarriage invoking two or more hierarchical traits, where one partner has a relative advantage in one trait, but a relative disadvantage in the other trait (Davis 1941; Merton 1941). In addition, these authors' classification of intermarriages identifies relationships where wives and husbands respectively have had a social advantage over their spouses both currently and historically (Schwartz et al., 2016). Our classification also draws a distinction between hypergamy and hypogamy in spouse's social origin and in their present social status. We therefore go beyond an analysis of mere endogamy and exogamy (Barfield, 1997; Van Leeuwen & Maas, 2005) and present a more nuanced view on intermarriage than other studies in this field. We appraise patterns of intermarriage based on subjective social status rather than occupation or education, using it as our measure of ascribed social origin and achieved social status.

METHOD

Data

We used data from all five rounds of South Africa's National Income Dynamics Study (NIDS) conducted in 2008, 2010, 2012, 2014 and 2017, respectively (http://www.nids.uct.ac.za). NIDS is a longitudinal panel survey of a nationally representative sample of South African households and includes over 28,000 individuals in 7,300 households from across the country. NIDS is based on a stratified two-stage cluster sample design that randomly selected 400 of Statistics South Africa's 3,000 primary sampling units (PSUs) for inclusion, drawing two clusters of 12 dwelling units from each PSU.

We constructed a dataset on co-resident couples based on information on marital status contained in the household roster. The residency requirement was that household members had lived under the particular roof or in the same homestead for at least 15 days during the past year, or, if having arrived in the household in the past 15 days, that this is considered their usual residence. We excluded a small number of same-sex couples (n = 32) and polygamous relationships (n = 56), but included both married couples and couples who are not married but living together, i.e. cohabitating. The inclusion of cohabitation is important as a focus on formal marriages only may skew the results, particularly insofar as the incidence of exogamy is often higher in informal relationships (Benson, 1981). In addition, cohabitation rates have been rising in South Africa, while marriage rates have declined (Budlender, Chobokoane, & Simelane, 2004; Moore & Govender, 2013; Posel & Rudwick, 2013; Posel, Rudwick, & Casale, 2011). In terms of terminology, therefore, our sample includes formally marriage', this includes a couples in de facto relationships. When referring to 'intermarriage' or 'marriage', this includes all couples, regardless of whether they are married or in a de facto relationship.

We had a total of 11,398 observations that represented 5,408 unique couples. Of these couples, only a relatively small proportion (8.2% or 443 couples), were observed in all five survey rounds. A substantial proportion (47.6% or 2,576 couples) were observed once only over this period of approximately ten years. This is a function of a combination of factors that, amongst others, include the design of the panel survey, the fluid nature of South African households, migratory patterns, and relatively high rates of separation and divorce. Due to list-wise deletion of missing values our analytical sample consisted of 8,918 dyads with a female and male partner.

Measures

In this section, we discuss each of the variables employed in our statistical analyses.

Life satisfaction: Global life satisfaction, which is extensively used in studies of subjective well-being and which represents an overall cognitive evaluation of life (Luhmann, Hofmann, Eid, & Lucas, 2012), was measured on a 10-point scale that asks respondents: "Using a scale of 1 to 10 where 1 means 'Very dissatisfied' and 10 means 'Very satisfied', how do you feel about your life as a whole right now?"

Subjective social status: We employed a MacArthur- or Cantril-type self-anchoring scale of subjective social status that represents a first-person view of the social world and the respondent's position within that world (Kilpatrick & Cantril, 1960). More specifically, the NIDS asked respondents: "Please imagine a six-step ladder where the poorest people in South Africa stand on the bottom (the first step) and the richest people in South Africa stand on the highest step (the sixth step)." Respondents were then asked, "On which step was your household when you were 15?" and "On which step are you today?" We used the respective responses to measure subjective social status at origin (when the respondent was 15) and at present (where the respondent is today). We truncated the six-point ladder into three categories: 'bottom' (1, 2), 'middle' (3, 4) and 'top' (5, 6).

The decision to adopt subjective rather than objective social status is based on its importance as a psychological mechanism (Schneider, 2019) and it being considered a summary measure of one's life-course socioeconomic position (Ferreira, Camelo, Viana, Giatti, & Barreto, 2018). The use of subjective social status at childhood is motivated by evidence that childhood adversity influences subjective well-being in later life (Lam, 2020; Nikolova & Nikolaev, 2018; Sutin, Stephan, & Terracciano, 2018). Furthermore, the literature suggests that assessments of social status using global rather than local referents (i.e. South Africans in general rather than members of your local community) are better predictors of life satisfaction (Haught et al., 2015). *Intermarriage*: We adopted the typology of marriage put forward by Schwartz et al. (2016), but based our classification on subjective social status rather than on Schwartz et al.'s (2016) classification based on parental and own education. The nine groups into which marriages were classified in this paper are presented in Table 1.

		Spouse's subjective social status at origin				
		HSSSO < WSSSO (hypogamy)	HSSSO = WSSSO (homogamy)	HSSSO > WSSSO (hypergamy)		
Spouse's current subjective social status	HSSSC < WSSSC (hypogamy)	'wife-advantaged'	current hypogamy (with homogamy at origin)	'husband exchange'		
	HSSSC = WSSSC (homogamy)	hypogamy at origin (with current homogamy)	'pure homogamy'	hypergamy at origin (with current homogamy)		
	HSSSC > WSSSC (hypergamy)	'wife exchange'	current hypergamy (with homogamy at origin)	'husband-advantaged'		

Table 1. A typology of intermarriage

Notes: HSSSC: husband's current subjective social status; WSSSC: wife's current subjective social status; HSSSO: husband's subjective social status at 15-years old; WSSSO: wife's subjective social status at 15-years old. Adapted from Schwartz et al. (2016: Table 1)

In addition to our dependent variable (life satisfaction) and our measure of intermarriage, which is our independent variable of primary interest, we included four sets of independent variables in the analysis; one set for living circumstances, one set with proxies for gender roles, one set with characteristics of relationships, and one set with a range of measures of sociodemographic and psycho-social heterogamy between partners. Below, we provide a brief description of each of these sets of independent variables.

Living circumstances: The measures of living circumstances included per capita household income as well as place of residence, which was measured as 'formal urban' (=1), 'informal urban' (squatter camps) (=2), 'tribal authorities or former homelands' (=3) or 'formal rural' (commercial farms) (=4), based on 2001 Census demarcations.

Gender roles: We included the total number of children and elderly in the household that are younger than 15 years or older than 65 years as proxy of caregiving burden. Insofar as the burden of childcare is likely to vary by children's age, we drew a further distinction between three age groups: 0-3 years, 4-9 years, and 10-14 years. Access to piped water in the dwelling was used as a proxy for domestic duties, in this case the duty of fetching water. NIDS also collected information on household decision-making roles. Respondents were asked to identify the members of the household responsible for decisions in each of four domains, namely decisions regarding day-to-day household expenditures, large unusual purchases, and who is allowed to live in the household and where the household lives. Decision-makers were designated as joint or main decision-makers or as not having any decision-making power. We constructed an additive index of decision-making power, based on this information, assigning a score of '0' to no decision-making role, a score of '1' to joint decision-making roles, and a score of '2' to main decision-making roles, resulting in a potential score between zero and eight. In addition, we distinguished between couples in which the female partner is the household head (=1) or not (=0), under the assumption that headship generally resides with males where traditional gender roles prevail.

Relationship characteristics: We distinguished three characteristics of relationships, namely marital status (i.e. married 'formally' and/or 'traditionally' (=1) or 'living together' (=0)), the reported relationship duration, in years, and the number of days in the past month that the couple spent together under the same roof ('residency').

Socio-demographic and psycho-social heterogamy: Our analysis included a total of seven measures of heterogamy, quantifying heterogamy on race (ethnicity), age, education, income, religiosity, self-reported health status, and decision-making power. Partners' age and highest level of education was measured in years and income as total personal monthly income in South African Rand (ZAR). Respondents were also asked, "How important are religious activities in

your life?" The four responses included 'not important at all' (=1), 'unimportant' (=2), 'important' (=3) and 'very important' (=4). In terms of self-reported health status, respondents were asked, "How would you describe your health at present? Would you say it is excellent (=5), very good (=4), good (=3), fair (=2) or poor (=1)?" All measures of heterogamy represented the relative difference in partners' scores, with male partners' scores subtracted from female partners' scores. The only exception is mixed marriages (partners from different racial groups), which was represented by a dummy variable taking on the value of '0' (no) or '1' (yes).

Analysis

We adopted the variable-centred approach that measures dissimilarity in life satisfaction, our main independent variable, as the relative difference in partners' respective scores on a specific individual trait or characteristic (Luo, 2017). Analytically, we first provide a descriptive account of our sample, following which we conduct a bivariate comparison of overall life satisfaction across the various types of intermarriage.

Two regression models were estimated for the levels of life satisfaction for males and females, respectively. We also estimated a third regression model to explain how intermarriage is associated with spousal dissimilarity in life satisfaction. All regressions were estimated as linear fixed effects models. For partner i (i = w, h) at time t, the individual-level life satisfaction equations were specified as:

$$y_{it} = \delta M_{it} + \beta X_{it} + \eta_i + v_{it} \tag{1}$$

, y_{it} is reported life satisfaction, M_{it} denotes the intermarriage variable, X_{it} is a vector of control variables, η_i is an unobserved time-invariant individual element, and v_{it} is the error term. For couple *c*, the model for couple differences in life satisfaction is specified as:

$$\overline{y_c} = \delta M_{ct} + \beta X_{ct} + \eta_c + v_{ct} \tag{2}$$

, where $\overline{y_c}$ denotes the difference in partners' life satisfaction (i.e. wife's score minus the husband's score), M_{ct} is the intermarriage variable, X_{ct} is a vector of control variables at the couple level, η_i is an unobserved time-invariant element of the couple, and v_{ct} is the error term.

RESULTS

According to the evidence presented in Table 2, there was no significant life satisfaction gap between female and male partners. As shown in Figure 1, life satisfaction scores were only identical in 35.11% of cases, whereas wives were less satisfied with life than their husbands in 33.44% of cases, compared to 31.45% of cases where wives were more satisfied with life than their male partners. Life satisfaction scores in female and male partners however were statistically significantly and positively correlated (r = 0.672, p < 0.001).

	Female		Mal	Male		Difference	
Variable	M or %	SE	M or %	SE	М	SE	
Age (years)	45.32	0.15	49.55	0.15	-4.23***	0.06	
Race (%)							
African	68.41		69.15				
Coloured	21.15		20.18				
Asian/Indian	2.39		2.44				
White	8.05		8.22				
Education (years)	8.18	0.05	8.07	0.05	0.12**	0.03	
Employment status (%)							
Not economically active	46.58		30.89				
Unemployed	12.93		7.03				
Employed	40.49		62.08				
Married (yes/no)	78.81		78.90				
Headship (yes/no)	23.38		70.03				
Monthly income ('000 ZAR)	3.19	0.31	5.82	0.25	-2.63***	0.25	
Income share (%)	40.56	0.34	59.45	0.34	-18.89***	0.69	
Life satisfaction	5.63	0.03	5.63	0.03	0.02	0.02	
Good self-reported health (yes/no)	0.83	0.00	0.83	0.00	-0.00	0.00	
Religiosity	3.50	0.01	3.34	0.01	0.16***	0.01	
Decision-making power	5.68	0.02	6.59	0.02	-0.92***	0.03	

Table 2.	Partner	characteristics,	by gender
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Note: Difference calculated by subtracting male partner's value from female partner's value. N = 8,918.

Significance of difference between female and male partner is: **p < 0.01, ***p < 0.001.

The descriptive statistics in Table 2 also show that wives on average were around four years younger than their male partners and were slightly more educated. Wives were also significantly less likely to be employed and were more likely to be unemployed or not economically active, hence the significantly lower monthly income in female compared to male partners and the males earning a larger share of total monthly income. Almost eighty percent of partners in the sample reported being married. As expected, male partners generally were identified as household heads rather than female partners. Self-reported health did not differ significantly between partners, but religiosity and decision-making power did, with male partners having significantly greater decision-making power, whereas female partners attached significantly greater importance to religion compared to their male partners.



Figure 1. Spousal dissimilarity in overall life satisfaction

Note: Difference calculated by subtracting male partner's value from female partner's value. N = 8,918.

Table 3 shows that in terms of intermarriage, pure homogamy was the most common intermarriage type, with almost 60% of relationships classified as identical in regard to the

subjective social standing of partners at childhood and at present. Next most prevalent were current hypogamy and current hypergamy, at approximately 8%, followed by hypogamy at origin and hypergamy at origin, at approximately 7%. In around 3% of cases each, marriages can be described as either wife or husband advantaged. Exchange marriages favouring husbands or wives were relatively rare and occurred in only 1% of cases, respectively. Mixed marriages based on race was a rare occurrence in this dataset. In 22% of relationships, one or both partners reported that they were living together in a de facto relationship. The majority of couples included the head of the household. Relationships on average were nineteen years in duration and partners spent few days a month living apart. Three quarters of couples had access to piped water in their dwelling or yard.

Table 3. Couple and	household	characteristics
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Variable	M or %	SE
Couple:		
Intermarriage (%)		
Wife advantaged	3.35	
Husband exchange	1.19	
Current hypogamy	8.32	
Hypogamy at origin	7.79	
Homogamy	59.85	
Hypergamy at origin	6.95	
Current hypergamy	8.34	
Wife exchange	1.23	
Husband advantaged	2.97	
Mixed marriage (yes/no)	0.02	0.00
Married (yes/no)	0.78	0.00
Headship (yes/no)	0.93	0.00
Relationship duration (years)	18.95	0.14
Residency (days/past month)	29.89	0.03
Household:		
Number of very young children (0-3 years)	0.47	0.00
Number of young children (4-9 years)	0.72	0.00
Number of older children (10-14 years)	0.55	0.00
Number of elderly (65+ years)	0.31	0.00
Per capita household income ('000 ZAR)	2.99	1.15
Piped water (yes/no)	0.74	0.00
Residence (%)		
Urban formal	49.13	
Urban informal	5.75	
Tribal/homeland	30.59	
Rural formal	14.53	
Note: $N = 8.018$		

Note: N = 8,918.

For each intermarriage category, Table 4 reports average life satisfaction by gender as well as the mean spousal dissimilarity in life satisfaction. Wives were significantly more satisfied than husbands in marriages characterised by wife advantage, current hypogamy, and hypogamy at origin. In contrast, among current hypergamy, wife exchange, and husband advantaged relationships, husbands were significantly more satisfied with life than wives. Life satisfaction was not statistically significantly different among spouses in the remaining three intermarriage types, namely husband exchange, homogamy, and hypergamy at origin.

Table 4. Overall life satisfaction and spousal dissimilarity in life satisfaction, by intermarriage

	Female		Ma	Male		Difference	
Variable	М	SE	М	SE	М	SE	
Wife advantaged	6.03	0.15	5.21	0.15	0.82***	0.14	
Husband exchange	6.19	0.24	5.79	0.24	0.40	0.24	
Current hypogamy	5.91	0.08	5.49	0.09	0.43***	0.08	
Hypogamy at origin	6.28	0.09	6.06	0.09	0.22**	0.08	
Homogamy	5.46	0.03	5.48	0.03	-0.02	0.02	
Hypergamy at origin	5.86	0.09	5.93	0.09	-0.07	0.09	
Current hypergamy	5.58	0.09	5.92	0.09	-0.35***	0.07	
Wife exchange	5.58	0.27	6.32	0.23	-0.74**	0.24	
Husband advantaged	5.45	0.16	5.98	0.17	-0.53***	0.14	

Note: Difference calculated by subtracting male partner's score from female partner's score. N = 8,918.

Significance of difference between female and male partner is: p < 0.05, p < 0.01, p < 0.01.

In Table 5, we report the fixed effects regression estimates for partners' level of life satisfaction as a function of intermarriage and a set of additional explanatory variables. The findings revealed interesting patterns with respect to intermarriage and individual life satisfaction. Wives in wife advantaged relationships were more satisfied with life compared to wives in homogamous relationships, whereas among husbands, those in wife advantaged marriages reported lower life satisfaction than those in homogamy. We also found a similar result for current hypogamy: compared to homogamy, wives in current hypogamy were significantly more satisfied with life, whereas husbands in current hypogamy were significantly less satisfied with life. Husbands in current hypergamy or wife exchange relationships were significantly more satisfied relative to husbands in homogamous relationships, whereas there were no such associations for wives. Wives in husband advantaged marriages, on the other hand, were significantly less satisfied with their lives as compared to wives in homogamy, but for husbands there was no difference in life satisfaction between homogamy and husband advantage.

	Female		Male	
Variable	β	SE	β	SE
Intermarriage (comparison = homogamy)				
Wife advantaged	0.439**	0.168	-0.571***	0.173
Husband exchange	-0.009	0.270	0.167	0.280
Current hypogamy	0.348***	0.100	-0.288**	0.102
Hypogamy at origin	0.209	0.109	-0.031	0.105
Hypergamy at origin	0.163	0.109	0.003	0.106
Current hypergamy	-0.166	0.099	0.281**	0.098
Wife exchange	-0.409	0.278	0.818***	0.246
Husband advantaged	-0.568***	0.177	0.334	0.173
Age (years)	0.098	0.062	-0.089	0.053
Age square (years)	-0.001	0.001	0.001	0.001
Education (years)	0.050	0.037	0.009	0.027
Employment status (comparison = not econ. active)				
Unemployed	-0.093	0.102	-0.108	0.119
Employed	0.181*	0.087	0.169	0.093
Married (yes/no)	0.342*	0.137	-0.069	0.128
Household head (yes/no)	-0.183**	0.061	0.133*	0.059
Good self-reported health (yes/no)	0.159	0.082	0.223**	0.079
Religiosity	0.281***	0.045	0.098**	0.038
Decision-making power	0.023	0.014	-0.006	0.016
Relationship duration (years)	-0.004	0.032	0.013	0.023
Relationship duration square (years)	0.001	0.001	0.000	0.000
Very young children (0-3 years)	-0.044	0.049	-0.006	0.048
Young children (4-9 years)	-0.120**	0.042	0.040	0.041
Older children (10-14 years)	0.000	0.042	0.072	0.042
Elderly (65+)	-0.007	0.098	-0.028	0.094
Per capita household income (ln)(ZAR)	-0.011	0.051	0.071	0.051
Piped water (yes/no)	0.164	0.113	-0.390***	0.114
Residence (comparison = urban formal)				
Urban informal	-0.402	0.492	-0.183	0.533
Tribal/homeland	0.344	0.381	-0.396	0.382
Rural formal	-0.047	0.366	0.046	0.332
Partner's life satisfaction	0.619***	0.014	0.627***	0.013
Within R ²	0.419		0.414	

Table 5. Fixed effects regression of female and male partners' levels of overall life satisfaction

Note: N = 8,918. *p < 0.05. **p < 0.01. ***p < 0.001.

In terms of the additional explanatory variables, among the more interesting findings were that married women were more satisfied than women in de facto relationships, whereas for men there was no such difference. Wives with more children between 4-9 years were less satisfied with life relative to wives with fewer such children, but there was no association between the numbers of children and life satisfaction for husbands. Interestingly, having access to piped water in the household was strongly related to lower life satisfaction among men. We also found that being employed was positively associated with life satisfaction, but only for women, while good self-reported health was only positively associated with life satisfaction for men.

There were only three factors that matter for the life satisfaction of both female and male partners. Attaching greater importance to religion enhanced the life satisfaction of both partners, although significantly more so for women than men. Partner's life satisfaction mattered for own life satisfaction, as a one-point increase in the partner's life satisfaction was associated with about 0.62 points higher life satisfaction for the spouse. This is quite a bit higher than the association reported by Posel and Casale (2015) who, using data from the first NIDS wave in 2008, reported a life satisfaction increase for the spouse of about 0.47 points given a one-point life satisfaction increase for the partner. Finally, being the household head was negatively and significantly related to life satisfaction for wives, but positively and significantly related to life satisfaction for husbands.

The fixed effects regression results for spousal dissimilarity in life satisfaction are presented in Table 6, with predictive margins for intermarriage depicted in Figure 2. Here a positive (negative) coefficient implies that female partners were more (less) satisfied with life relative to their male partners. In terms of intermarriage, compared to those in homogamy, wives were significantly more satisfied with life than their husbands if they were in wife advantaged and current hypogamy relationships. When compared to those in homogamy, for current hypergamy, wife exchange, and husband advantaged relationships, husbands were more satisfied with life relative to wives. These results were consistent with the individual well-being models reported in Table 5. Wife advantage and current hypogamy were associated with higher life satisfaction among women and lower life satisfaction among men (Table 5), thus

explaining why women in these intermarriage types were more satisfied with life relative to men (Table 6). Current hypergamy and wife exchange were associated with higher life satisfaction among men (Table 5), which is why women in these intermarriage types were less satisfied with life relative to their male partners (Table 6). Finally, compared to wives in homogamy, wives in husband advantaged relationships were significantly less satisfied with life (Table 5), which is consistent with Table 6's observation that wives in husband advantaged marriages were less satisfied with life compared to their husbands.

Table 6. Fixed effects regression of spousal dissimilarity in couple's overall life satisfaction

Variable	β	SE
Intermarriage (comparison = homogamy)		
Wife advantaged	0.629***	0.188
Husband exchange	0.042	0.304
Current hypogamy	0.413***	0.115
Hypogamy at origin	0.140	0.113
Hypergamy at origin	0.097	0.124
Current hypergamy	-0.286**	0.109
Wife exchange	-0.681*	0.296
Husband advantage	-0.503*	0.206
Difference in age (years)	0.002	0.044
Difference in education (years)	0.025	0.027
Difference in monthly income ('000 ZAR)	0.000	0.001
Wife's income share (%)	0.002*	0.001
Difference in self-reported health	0.080**	0.028
Difference in religiosity	0.112**	0.044
Difference in decision-making power	0.006	0.010
Relationship duration (years)	0.035	0.020
Relationship duration square (years)	-0.001	0.000
Residency (days/month)	0.007	0.044
Residency square (days/month)	0.007	0.044
Married (yes/no)	0.295*	0.146
Headship (yes/no)	-0.064	0.182
Piped water (yes/no)	0.353**	0.131
Very young children (0-3 years)	-0.037	0.053
Young children (4-9 years)	-0.098*	0.045
Older children (10-14 years)	-0.037	0.047
Elderly (65+ years)	-0.011	0.107
Per capita household income (ln)(ZAR)	-0.043	0.056
Residence (comparison = urban formal)		
Urban informal	-0.102	0.510
Tribal/homeland	0.462	0.454
Rural formal	-0.103	0.434
Within R ²	0.026	

Note: N = 8,918. *p < 0.05. **p < 0.01. ***p < 0.001.

A higher income share for wives translated into being slightly more satisfied with life than their husbands, and wives were more satisfied with life than husbands if they were in better health than their husbands. Where wives were more religious than their husbands, wives were also more satisfied with life compared to their husbands. Women were more satisfied with life than their male partners if they were formally married as compared to in a de facto relationship, and women were also more satisfied with life than their male partners if there was piped water on site. Also, having more young children aged 4-9 years implied that women were less satisfied with life than were their male partners.

Figure 2. Spousal dissimilarity in life satisfaction, by intermarriage type



DISCUSSION

Our first finding of importance is that similarity in life satisfaction in marriages and cohabiting relationships, in statistical terms, can be described as moderate rather than strong, i.e. r < 0.7. A recent review by Luo (2017) also reports the correlations between partners' subjective wellbeing to be moderate rather than strong. Although we find that partners' life satisfaction are interdependent, as reported in the literature (Bourassa et al., 2015; Shakya, 2015; Wünche, Weidmann, & Grob, 2020), there is a relatively high degree of spousal dissimilarity, as was reported by Schade et al. (2016) in their research on romantic relationships in Germany. This implies that it is necessary to investigate the factors associated with such dissimilarity, which is what our research set out to do, unlike much of the research in this field that focuses primarily on levels of and similarity in rather than dissimilarity in life satisfaction; the only exception being Posel and Casale (2015), whose work on South Africa we partly replicate and extend.

Other recently published studies have documented evidence that intermarriage of various kinds is associated with differences in levels of subjective well-being, be it happiness or life satisfaction. Qian and Qian (2015) find that the happiness of married people in urban China is higher under educational hypergamy than homogamy. Chen (2018), however, shows that Chinese women are less happy under hypergamy but more so under hypogamy in terms of intermarriage on occupational class. Yet, both these studies do not proceed to also explore spousal dissimilarity in subjective well-being as part of the analyses. More recently, Potarca and Bernardi (2020) have shown that intermarriages between immigrants and German natives need not face a life satisfaction penalty and that in fact, at least initially, there is a life satisfaction premium on intermarriage for men, during the cohabitation stage, and for women, during the transition from cohabitation to marriage.

Our study is the first to show that intermarriage on subjective social status is associated with spousal dissimilarity in life satisfaction. The associations are what one would expect. In line with the theories of relative deprivation and social comparison, those spouses who are at a relative advantage (disadvantage) are more (less) satisfied with life compared to their partner. In fact, we even find that exchange marriages matter for life satisfaction: female partners who have given up their initial advantage for their partner's privilege are less satisfied with life than

their partners. Insofar as spousal dissimilarity in subjective well-being has been shown to predict the dissolution of marriages and relationships (Guven et al., 2012; Powdthavee, 2009), intermarriages of various types are therefore potentially at risk of dissolution.

Our findings furthermore highlight the role of empowerment in enhancing life satisfaction (Hossain, Asadullah & Kambhampati, 2019). Contrary to the extant literature, which reports that women's economic empowerment is negatively associated with life satisfaction (Hajdu & Hajdu, 2018; Wu, 2020) or that the partner pay gap matters only for men and not for women (Gash & Plagnol, 2020), we however find that women's relative income, represented by their proportional earnings relative to that of their spouse, is positively associated with spousal dissimilarity in life satisfaction. In other words, women are more likely to be more satisfied with life overall than their male partners as their contribution to the couple's economic resources increase. Related to this is our result that gender roles, specifically gendered divisions of labour, may put wives at a relative disadvantage compared to their partners when it comes to subjective well-being. Where caregiving burdens are greater women are less satisfied with life than their partners and where it may not be necessary to collect water, wives are more satisfied than their partners.

The evidence from our research also suggests a cohabitation gap (i.e. married persons reported higher well-being than those in cohabitation), complementing the relatively small literature on this phenomenon (Blekesaune, 2018; Botha & Booysen, 2013; Dilmaghani, 2019; Nock, 1995; Soons & Kalmijn, 2009). Finally, we can add that our research lends further support to the body of evidence that religiosity (Kim-Prieto & Miller, 2018) and self-reported health (Ngamaba, Panagioti, & Armitage, 2017) are associated with life satisfaction, but provides evidence that heterogamy in these correlates are in fact also associated with spousal dissimilarity in life satisfaction.

Limitations

By design, the NIDS survey only allows for an analysis of co-resident couples, which means that the findings may not be entirely representative of all relationship types or forms found in developing country contexts. Further tailor-made studies are needed to shed light on life satisfaction in such couples, particularly insofar as spousal dissimilarity may be hypothesised to be relatively more pronounced in these types of relationships. It was not possible moreover to, with the data at hand, look into trajectories in spousal dissimilarity within the same couples, as did Potarca and Bernardi (2020), nor to reliably identify cases of relationship dissolution. As such, we can claim only that intermarriage matters for spousal dissimilarity in life satisfaction on the aggregate and need to emphasise that further research is required to explore how these disparities in intermarriages manifest over time and how spousal dissimilarity in life satisfaction may impact on the dissolution of intermarriages.

The explanatory power of our fixed effects model for spousal dissimilarity in life satisfaction is relatively low, which suggests the presence of omitted variables bias. Most notable among potentially omitted variables are relationship quality (Chi, Wu, Cao, Zhou, & Lin, 2020; Gustavson et al., 2016) and marital satisfaction (Chi et al., 2020; Gaunt, 2006; Hawkins & Booth, 2005). There is a need therefore to collect data on these mediating variables in conducting nationally representative studies on couples' subjective well-being, both in developed and in developing countries.

CONCLUSION

Divorce and separation are detrimental to partners, their children and families, and society at large. Studies have shown that intermarriage increases the chances that unions may dissolve and so too spousal dissimilarity in subjective well-being. There is a dearth of knowledge however on how intermarriage on social class may be associated with such dissimilarity in subjective well-being. We present evidence that spousal dissimilarity in life satisfaction, which is relatively common in this developing country context, is associated with various forms of intermarriage. Further research is required however to investigate how spousal dissimilarity in subjective well-being may mediate the impact of intermarriage on the dissolution of unions and relationships.

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