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Couples vacations and romantic passion and intimacy

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ABSTRACT

Despite limited empirical support, vacations are marketed as beneficial for romantic partners. Using the self-expansion model as a foundation, we tested how self-expanding (e.g., novel, interesting, challenging) vacation experiences are associated with passion, physical intimacy, and relationship satisfaction. Study 1 (n = 238 partners) found that higher individual self-expanding experiences on vacations predicted higher post-vacation romantic passion and relationship satisfaction for couples traveling *with* their partners, but not those that did not travel together. Study 2 examined 102 romantic dyads that traveled together and found that higher self-expanding experiences on vacations predicted more post-vacation physical intimacy. Our findings advance self-expansion research and provide evidence for the tourism industry to design and promote self-expanding vacation experiences for couples seeking improved relationships and meaningful vacations.

Introduction

Family vacations entail memorable experiences that are out of the ordinary of day-to-day life (Duerden et al., 2018; Fu, Kirillova, & Lehto, 2022; Schänzel & Smith, 2014; Schänzel & Yeoman, 2015) and can result in a higher sense of meaning, a more nuanced sense of self, improved well-being, happiness, and functioning well as a family (e.g., Kim, Ribeiro, & Li, 2022; Smith & Diekmann, 2017; Sterchele, 2020; Vada, Prentice, & Hsiao, 2019). Romantic couples (without a focus on children) are an understudied family form in tourism literature (Durko & Petrick, 2013; Shahvali, Kerstetter, Tews, Mitas, & Behrad Far, 2023; Shahvali, Kerstetter, & Townsend, 2021) even though vacations would seem to play an important role in building and maintaining relationship romance and passion.

Relationships research reveals how important relationship quality indicators such as romantic passion, physical intimacy, and relationship satisfaction are for romantic couples' intent on flourishing and pursuing the good life (e.g., Reis & Gable, 2003). Yet, in a tourism context, it has yet to be empirically demonstrated if and how vacations offer romantic relationship benefits, and through what type of vacation experiences. Thus, the primary aim of this study was to address *if and how vacations benefit romantic couples' relationship quality.*

Despite a lack of empirical evidence, many tourism marketers and providers actively target romantic couples by promoting the benefits of couples' vacations such as strengthening relationship bonds. Their decision to do so may be wise as romantic relationships research (e.g., Acevedo & Aron, 2009; Sheets, 2014) suggests a common goal of couples, worldwide, is to maintain or improve their relationships. For romantic couples, especially those in long-term relationships, the habituation and familiarity of day-to-day life can add challenges to maintaining romantic passion, physical intimacy, and overall relationship satisfaction (Buhler, Krauss, & Orth, 2021; Muise et al., 2019). And, without romantic passion, couples' relationship quality can be negatively affected, which in turn influences individuals' levels of happiness, life satisfaction, positive affect, and frequency of physical intimacy (Dush & Amato, 2005; Love & Holder, 2015). A vast array of research now suggests that a viable path to fight the habituation process and improve relationship quality may be to engage in self-expanding (i.e., novel, interesting, or challenging) experiences (Acevedo & Aron, 2009; Aron, Norman, Aron, McKenna, & Heyman, 2000; Raposo, Rosen, & Muise, 2020), which vacations can offer (Mitas & Bastiaansen, 2018; Shahvali et al., 2023). Thus, vacationing together as a couple would seem likely to play a valuable role in early and ongoing romantic relationship quality.

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Our study applied the self-expansion model (Aron & Aron, 1996; Aron, Lewandowski, Branand, Mashek, & Aron, 2022) to couple vacations (i.e. couples' joint or shared travel experiences). The self-expansion model theorizes that all people are inherently motivated to continuously expand the self through participation with close relations, such as a romantic partner, in novel, challenging, interesting, or exciting experiences. These experiences theoretically are associated with increases in positive feelings towards one another, romantic passion, and relationship satisfaction (Aron et al., 2022; Graham & Harf, 2015). Overall, spending time in joint leisure can be good for romantic relationships, yet existing research rarely investigates the unique attributes of out-of-theordinary experiences such as vacations and their relationship outcomes (Johnson, Zabriskie, & Hill, 2006; Melton, Hodge, & Duerden, 2022; Shahvali et al., 2023; Voorpostel, van der Lippe, & Gershuny, 2010). Expecting that vacations will offer varying degrees of self-expanding experiences, our research question was: Are higher levels of selfexpanding experiences during romantic couples' vacations associated with higher levels of post-travel relationship quality?

In summary, our study contributes to knowledge in tourism by examining one of the social psychological mechanisms (i.e., selfexpansion) through which vacations may benefit romantic couples. We used two complementary research samples of mixed-sex couples. Study 1 had one partner recall a recent leisure vacation and evaluated romantic relationship quality indicators (i.e., passion, relationship satisfaction) so that differences could be examined between those who traveled *with* partners (i.e., couple vacations) and those who traveled *without* partners. Study 2 examined and measured both partners' vacation experiences (i.e., dyadic design) and how each evaluated their relationship quality indicators (i.e., intimacy, relationship satisfaction) after a series of couple vacations over one year.

The practical application of this investigation and similar research lies in helping tourism service providers, destination management, and marketing organizations to improve the quality and diversity of tourist experiences they offer. Such improvement may help individuals, romantic couples, and other family groups benefit through selfexpansion; enhanced well-being, including improvements in relationship quality; and positive memories that contribute to increased wordof-mouth advertising and intention to revisit. Further, as couples realize the value of vacations for maintaining romantic intimacy and passion, they are more likely to prioritize regular travel.

Literature review

To our knowledge this is the first study to employ the self-expansion model in tourism research looking at post vacation relationship quality. The self-expansion model provides a conceptual framework for romantic couples to build and maintain relationship quality indicators such as passion in long-term relationships in any context including vacations (Acevedo, Xu, Lewandowski Jr., & Aron, 2017; Aron et al., 2022; Xu, Lewandowski, & Aron, 2020). This widely accepted and heavily used model from social psychology incorporates two main principles. The first principle focuses on the innate need for humans to grow the self by learning, exploring, and expanding upon their own competencies. The second principle, inclusion of others in the self, suggests that close relationships are a primary way humans expand themselves (Acevedo et al., 2017; Aron, Aron, & Norman, 2004). People use their close relationships, such as romantic relationships, to expand their own selfconcepts by including others' knowledge, identities, and perspectives into their own through shared participation in self-expanding activities (Aron et al., 2004; Aron et al., 2022). Thus, vacations, especially leisure vacations that include voluntary self-expanding experiences, could benefit individuals and couples by capitalizing on both principles by feeding into the innate need to grow, learn and expand - including growth within romantic relationships (e.g., doing new things together, learning more about each other).

Research in the past 20 years has revealed that individuals and

relationships benefit from ongoing self-expansion, which is linked to a range of relationship quality indicators including relationship satisfaction, romantic passion, and physical intimacy (Aron et al., 2022; Carswell et al., 2021), the three outcomes addressed in this manuscript. Relationship satisfaction (i.e., overall assessment of a relationship) is a key relationship quality factor that can be stable or may decrease before improving in long-term relationships (Buhler et al., 2021). Romantic passion or love (i.e., an intense emotional state of strongly longing for union with another)-most commonly measured with the Passionate Love Scale (Hatfield & Sprecher, 1986)-is another key factor that is partly distinct from relationship satisfaction (e.g., Aron et al., 2004; Carswell et al., 2021). Romantic passion, typically highest early in a relationship (Acevedo & Aron, 2009), motivates a person to seek physical intimacy (Carswell et al., 2021). Physical intimacy in relationships is a common behavioral indicator (e.g., frequency of sex) that results from passion but is also associated with relationship satisfaction and individual well-being (Muise et al., 2019). Novel and exciting vacation experiences may be linked to each of these indicators of relationship quality.

A range of non-tourism studies have found that self-expanding activities are particularly effective for increasing relationship quality such as romantic passion and physical intimacy (e.g., Aron et al., 2000; Harasymchuk, Walker, Muise, & Impett, 2021; Muise et al., 2019; Raposo et al., 2020). Self-expanding activities have been operationalized to include novel, interesting, challenging, adventurous, exciting, playful, sexual, romantic, and spontaneous activities (e.g., Aron et al., 2000; Coulter & Malouff, 2013; Graham, 2008). More specifically, they may include one-time outings like attending a novel date, self-disclosure during restaurant conversations, forms of physically challenging activities like exercise, and learning something new with a partner (Muise et al., 2019). The beneficial impact and outcomes of these and other types of self-expanding activities have generally been assessed through documentation of immediate or relatively proximal (e.g., three weeks) outcomes of short lab-based activities (e.g., seven-minute) or single events such as a novel date (Aron et al., 2000; Harasymchuk et al., 2021).

Notably, we propose leisure vacations as self-expanding experiences that are *a methodological extension of self-expansion* that moves beyond lab studies or singular self-expanding activities to a multi-day context that could involve more and longer lasting self-expansion. Further, vacations likely vary in self-expanding experiences but those high in self-expanding experiences may lead to more enduring post-vacation relational benefits such as romantic passion, physical intimacy, and relationship satisfaction. Thus, in this study we examined if vacations offer a range of self-expanding experiences and—if yes—whether the experiences are associated with post-vacation relationship quality.

As vacations involve breaking routine and going somewhere away from home, we expected that all forms of vacations offer some degree of self-expanding experiences because they take place away from everyday life. Thus, based on the principles of the self-expansion model, we contend that individuals and couples (especially when traveling together) can grow from vacations. However, some will have higher levels of self-expanding experiences than others as vacations may or may not include unexpected elements such as exposure to new cultures or unexpected challenges-potentially ranging from somewhat routine situations and rituals to very new experiences (Coffey & Csikszentmihalyi, 2016; Csikszentmihalyi & Coffey, 2017; Melton, 2017; Shahvali et al., 2023). We also accept that each member of a travel group may have different perceptions of the degree of their self-expanding vacation experiences, and these perceptions interact with and can be affected when shared with others such as a romantic partner (Fu, Lehto, & Park, 2014; Schänzel & Smith, 2014). Despite these differences, our first hypothesis (H1) was:

Higher levels of self-expanding experiences during leisure vacations will be associated with higher levels of relationship quality measured

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through romantic passion (H1a), relationship satisfaction (H1b), and physical intimacy (H1c).

Self-expansion can occur and be measured with activities done individually or shared with a romantic partner. Shared self-expanding experiences are measured when couples jointly engage in experiences such as vacationing together, and not separately. Based on the second principle of the self-expansion model, romantic couples traveling together should benefit *more* from self-expanding experiences because each partner experiences the other's self-expansion as well. Thus, shared experiences could create a sense of joy that is accentuated for both members of the couple when they prioritize self-expanding experiences (Aron et al., 2022). Those that do not vacation together would not have these shared experiences and can only self-expand separately. Thus, we also hypothesized (H2):

The association between self-expanding experiences and romantic passion (H2a) and relationship satisfaction (H2b) will be stronger for individuals that vacationed with their partner compared to those that vacationed without their partner.

A limited array of travel research alludes to how self-expansion on vacations might be beneficial for couples that travel together without directly testing it. Researchers (Kim et al., 2022; Tung & Ritchie, 2011; Zins & Ponocny, 2022) have reported that tourists gain a better understanding of themselves and their personal value through vacationing. A nation-wide survey of American couples by the US Travel Association (2013) revealed that couples who travel together believe that romance is still alive in their relationship and have higher communication quality compared to respondents who do not travel together. Smaller studies conducted with couples found increased and higher quality communication during and after vacations (de Bloom, Geurts, & Kompier, 2012; de Bloom, Geurts, & Lohmann, 2016); greater satisfaction and commitment to one's relationship (Durko, 2014); rekindled romance and increased intimacy (Durko & Petrick, 2013); along with a positive relationship between novel joint vacation experiences and higher levels of couple flexibility and cohesion following the vacation (Shahvali et al., 2023, 2021). These findings may be due in part to the fact that vacations are "...emotionally, cognitively, and often physically engaging ... " (Su, Tang, & Nawijn, 2020, p. 105) and when shared with a travel companion whose abilities and interests are comparable, may lead to selfexpansion. Notably, most of this is indirect evidence focused on outcomes during or immediately after a vacation. We sought to examine direct links to long-term relationship quality indicators. Across two studies, we expected that vacations would offer varying degrees of selfexpanding experiences and that higher levels of self-expanding experiences would be associated with higher levels of relationship quality especially when couples vacationed together as opposed to when partners traveled without their partners. Building off principle 1 of the selfexpansion model, Study 1 allowed us to focus more on how selfexpanding experiences for individuals that did or did not travel with their partner related to post-vacation relationship passion and satisfaction. Study 2 dug deeper into shared self-expanding experiences for romantic couples (principle 2 of the self-expansion model) over multiple vacations and how that related to post-vacation relationship intimacy and satisfaction.

Methodology

Study 1

Study 1 (2011) investigated our prediction (H1) that self-expanding experiences during participants' most recent leisure vacation will be linked to post vacation romantic quality measured as romantic passion (H1a) and relationship satisfaction (H1b) levels. Further, we used a quasi-experimental design by comparing partners that vacationed with their significant other compared to those that vacationed without their partner on their most recent vacation. This allowed us to examine our prediction (H2) that self-expanding experiences links to relationship passion (H2a) and satisfaction (H2b) will be stronger for those that vacationed with their partner than those that did not.

As part of a large study on leisure vacations, a total of 470 participants (61% females) were recruited online through Amazon's Mechanical Turk. Participation was limited to individuals over the age of 18 living in the United States. Participants that failed more than two (of six) attention checks spread throughout the survey were excluded.

As the goal of this study was to broadly examine relationship quality, the sample was limited to participants who reported they were currently cohabitating, in a relationship, and had been in that relationship at the time of their most recent vacation. We did not ask about the gender of the partner so we do not know the percentage of mixed and same-sex relationships as we expected self-expansion to work similarly for all couples. See Table 1 for the demographic details of our sample (n = 238).

Study 1 measures

Participants self-reported their demographic information (e.g., age, gender). They also reported on their current relationship status, living arrangement, and most recent vacation (Table 1).

Relationship length. Participants provided the number of years and months they have been in their current relationship. The number of

Table 1

Sociodemographic characteristics of participants in Study 1 (n = 238) and Study 2 (n = 204*).

	Study 1		Study 2	
	n	%	n	%
Gender				
Female	158	66.4	102	50.0
Male	80	33.6	102	50.0
Marital status				
Married/partnered	158	66.4	48	76.5
Unmarried/cohabitating	80	33.6	156	23.5
Age				
18–24	36	15.1	18	8.8
25–34	104	43.7	104	51.0
35–54	83	34.9	56	27.5
> 54	15	6.3	26	12.7
Relationship length (years)				
1–5	104	43.7	84	42.4
6–10	58	24.4	54	27.3
11–20	45	18.9	26	13.1
> 20	31	13.0	40	19.6
Highest educational level				
< 4-year college degree	106	45.7	76	37.3
4-year or more college degree	132	54.3	128	62.7
Ethnicity				
Caucasian	188	79.0		
Asian/Pacific Islander	23	9.7		
Hispanic	8	3.4		
Black/African-American	6	2.5		
Other	11	4.6		
Income (household USD)				
\$0-49,999	107	45.1	50	25.8
\$50,000-99,999	95	39.9	66	34.0
> \$99,999	35	15.0	78	40.2
Note: Study 2 was commised of 10	·	minod oon d	1 1	

Note: Study 2 was comprised of 102 romantic mixed-sex dyads. Both partners (n = 204) were asked to fill out the survey.

months was divided by 12 and added to the total years. Relationship lengths ranged from 5 months to 48 years (m = 10.32, sd = 9.51). Log transformations were used to better account for short-term versus long-term differences in relationship length. Notably, analyses with or without log transformations yielded similar results so non-transformed results are reported.

Travel with partner. Participants were asked if they traveled with their romantic partner on their most recent vacation. Response options were no (coded as 0) or yes (coded as 1). The majority of participants reported traveling with their partners (m = 0.89, sd = 0.31).

Self-expanding experiences on vacations (Cronbach's $\alpha = 0.88$). When Study 1 data were collected, there was no scale that uniformly assessed self-expanding experiences during a vacation so we developed one. As part of the scale development and validation, we reviewed existing theory, research, and measures of self-expansion (e.g., Aron et al., 2000; Lewandowski Jr. & Aron, 2002; Muise et al., 2019), along with consulting experts in self-expansion, which included an author on this paper. We developed items (see Appendix A) to determine the extent to which participants engaged in self-expanding experiences (e.g., novel, interesting, exciting, challenging) during their most recent vacation. Participants were instructed to think back to their most recent leisure vacation as they responded to items (e.g., "This vacation was exciting") using a 7-point Likert scale ranging from 1 (Strongly disagree) to 7 (Strongly agree). After examination by two self-expansion experts independent of this project, two items were dropped for poor face content validity. (e.g., "This vacation was worth the money"). For the remaining 5 items (m = 5.12, sd = 13.10), factor analyses indicated further scale validity. Inter-item correlations for the items ranged from 0.46 to 0.77; the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.85, exceeding the recommended minimum of 0.6; and Bartlett's Test of Sphericity was significant ($X_{(15)}^2 = 1175,79, p < .001$). Only one component was extracted with individual items loading between 0.68 and 0.88. Higher scores indicated higher levels of self-expanding experiences while on vacation.

Relationship quality

Romantic passion (Cronbach's $\alpha = 0.92$). To test romantic passion, we used the five non-obsessive passion items (see Acevedo & Aron, 2009) from the Passionate Love Scale (Hatfield & Sprecher, 1986, 2011). All five items (e.g., "I want my partner—physically, emotionally, and mentally") measure thoughts, feelings, and behaviors characteristic of romantic love using a 9-point Likert scale ranging from 1 (*Not true at all*) to 9 (*Definitely true*). Higher scores indicated more romantic passion.

Relationship satisfaction (Cronbach's $\alpha = 0.91$). To measure relationship satisfaction, we used the Relationship Quality Scale (Graham, 2008) that measures closeness (e.g., How connected do you feel to your partner?") and satisfaction (e.g., "How happy are you with your partner?") on a 7point Likert scale ranging from 1 (Not at all) to 7 (Very much). Higher scores by participants indicated higher levels of perceived relationship satisfaction.

Study 1 results

To test our Study 1 hypotheses, we started with bivariate correlations and then used the Process Procedure v 2.13.2 (Hayes, 2018) in SPSS to test for moderation. To determine whether self-expanding experiences while traveling were associated with romantic passion and relationship satisfaction for those that traveled with or without their partners, travel with partner and self-expanding experiences were entered as predictors of passion (H1a) and relationship satisfaction (H1b) respectively in different models. An interaction of travel with partner and selfexpanding experiences was also added to test associations with romantic passion (H2a) and relationship satisfaction (H2b). Gender and relationship length were also included in all models, but they were not significant and removed for parsimony.

The means, standard deviations, and bivariate correlations for all study variables are reported in Table 2. Romantic passion was positively correlated with relationship satisfaction, r = 0.70, p < .001, travel with partner, r = 0.14, p < .05, and self-expanding experiences, r = 0.18, p < .01. In addition, relationship satisfaction was positively correlated with travel with a partner, r = 0.16, p < .05, and self-expanding experiences, r = 0.19, p < .01. Analyses of variance revealed no differences between those that traveled together and those that did not when examining age, gender, relationship length, income, and self-expanding experiences on vacation. Romantic passion (H1a), F(1,236) = 4.43, p = .036, and relationship satisfaction (H1b), F(1,236) = 5.98, p = .015, were significantly higher for those who traveled with their partner.

Romantic passion

In testing H1a, travel with partner moderated the association between self-expanding experiences and romantic passion (see Table 3). The overall model was significant, F(3,234) = 5.52, p = .001, $R^2 = 0.07$. Self-expanding experiences and travel with partner were not predictors of romantic passion (H1a). However, the moderation (H2a; see Fig. 1) was significant, b = 0.65, t(234) = 2.02, p < .044 (95% CI = 0.017, 1.28), such that conditional effects revealed that only self-expanding experiences for participants who traveled with their partner predicted greater romantic passion, *b* = 0.29, *t*(234) = 3.25, *p* = .001 (95% CI = 0.114, 0.463). Conversely, self-expanding experiences for participants who did not travel with their partner was unrelated to romantic passion, b = -0.36, t(234) = -1.17, p = .247 (95% CI = -0.971, 0.225). The moderation accounted for a significant increase in variance predicted, F $(1,234) = 4.09, p = .044, R^2 \Delta = 0.02$. Thus, participants with higher levels of self-expanding experiences reported greater post-vacation romantic passion only for those who vacationed with their partners.

Relationship satisfaction

When examining relationship satisfaction, we found partial support for our hypotheses. The overall model for travel with a partner as a moderator of the association between self-expanding experiences and relationship satisfaction was significant, F(3,234) = 5.38, p = .001, $R^2 =$ 0.06. None of the simple effects (H1b) were significant (see Table 3). However, conditional effects (see Fig. 2) revealed that self-expanding experiences were a significant predictor of relationship satisfaction (H2b) for participants who traveled with their partner, b = 0.17, t(234)=3.15, p = .002, (95% CI = 0.064, 0.276) as higher rates of selfexpanding experiences were linked to higher rates of relationship satisfaction; whereas participants who did not travel with their partners had no significant differences, b = -0.01, t(234) = -0.03, p = .976 (95%) CI = -0.375, 0.363). Moderation did not account for a significant increase in variance predicted, F(1,234) = 0.93, p = .369. Thus, our hypotheses were partially supported such that reports of higher rates of self-expanding experiences predicated greater relationship satisfaction only for those who vacationed with their partners (see Fig. 2).

Study 1 discussion

We found that vacations can be a source of self-expansion and levels of self-expanding experiences varied. As hypothesized, romantic passion and relationship satisfaction were higher only for individuals that traveled with their partner and reported higher rates of self-expanding experiences. These effects held regardless of the length of couples' relationship. By contrast there were no differences in passion or satisfaction for couples that did not travel together, nor for couples that reported relatively fewer self-expanding experiences.

The strengths of Study 1 include the use of a large sample size and multiple relationship quality metrics. Additionally, our quasiexperimental design comparing individual experiences for couples that traveled together on their most recent vacation to those who did not is

Table 2

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Study 1	descriptive	statistics	and (correlations	(n = a)	238).

	Mean	SD	Gender	Rel Length	Passion	Satisfaction	TWP
Gender	1.66	0.47					
Rel Length	10.32	9.51	0.044				
Passion	7.24	1.70	0.024	-0.075			
Satisfaction	6.11	1.06	-0.010	0.074	0.698***		
TWP	0.89	0.313	-0.021	0.053	0.136*	0.162*	
Self-EE	5.13	1.26	0.018	-0.079	0.182**	0.189**	0.038

Note. Gender, 1 = male; 2 = female. Rel = relationship. TWP = traveled with partner (0 = no, 1 = yes). Self-EE = self-expanding experiences. * p < .05. ** p < .01. *** p < .001.

Table 3

Travel with partner moderates the association between self-expanding experiences and relationship passion and satisfaction (n = 238).

	Romantic	passion	Relationship satisfaction		
	b	95% CI	b	95% CI	
Constant	8.39***	[5.29 11.50]	5.69***	[3.81 7.57]	
Travel with Partner	-2.55	[-5.79 0.69]	-0.38	$[-2.35\ 1.58]$	
Self-Expanding Exp.	-0.36	[-0.97 0.25]	0.01	[-0.37 0.36]	
Interaction	0.65*	[0.17 1.28]	0.18	$[-0.21 \ 0.56]$	

Note: Travel with partner was coded as no = 0 and yes = 1. Interactions were tested in two independent models. Interaction = self-expansion X travel with partner.

* *p* < .05. *** *p* < .001.

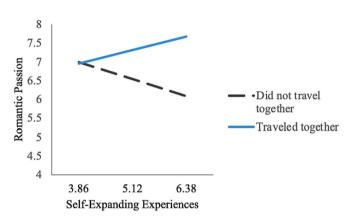


Fig. 1. Romantic passion association with self-expanding experiences as moderated by travel together.

Note: The association between romantic passion and self-expanding vacation experiences was moderated by whether the participant did or did not travel with their partner. Higher scores indicate higher levels of passion and selfexpanding experiences.

similar to experimental self-expansion studies where one group is assigned to do self-expansion while the other is not (e.g., Reissman, Aron, & Bergen, 1993). Study 1 allowed for a wide array of leisure vacation types and self-expanding activities as participants focused on their last leisure vacation with no restrictions. Limitations of this sample included focusing only on the individual (not the couple), a lack of random assignment, asking only about one vacation, and a crosssectional retrospective design. Study 2 was employed to address several limitations of this study.

Study 2

Following the tenants of the Revised Core and Balance Model of Family Leisure Functioning (Townsend, Van Puymbroeck, & Zabriskie, 2017) and advice by Durko and Petrick (2013), Study 2 (2018) examined the role of *shared* rather than individual self-expanding vacation experiences for couples who took multiple vacations together in the past

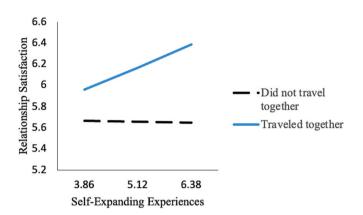


Fig. 2. Relationship satisfaction association with self-expanding experiences as moderated by travel together.

Note: The association between relationship satisfaction and self-expanding vacation experiences is moderated by whether the participant traveled with or without their partner. Higher scores indicate higher levels of relationship quality and self-expanding experiences.

year. Study 2 also expands on Study 1 by utilizing a new scale for measuring shared self-expanding vacation experiences and a focus on post-vacation physical intimacy and relationships satisfaction.

To be included in this study, spouses/partners had to be in a committed, cohabitating relationship for a minimum of one year, could not have any children living in the home, and were required to have gone on at least two vacations together in the last year (i.e., January to December 2017), for a duration of three nights or more. This allowed us to examine the link between relationship quality (i.e., physical intimacy, relationship satisfaction) and self-expanding experiences using dyadic, partner-actor reports from couples that vacationed together.

Surveys were sent to 218 qualified couples who were asked to share the survey link and their unique worker ID (i.e., MTurk ID) with their partner and to take the survey separately. Upon review of the on-line surveys, 204 (102 couples) completed surveys were maintained for analysis. Demographic characteristics of the couples can be seen in Table 1.

Study 2 measures

A standard dyadic reciprocal study design was employed meaning that each person had only one partner and the same variables were measured for each member of the dyad. Like Study 1, respondents were asked to share demographic information. They also reported on their joint vacations over the past year, their self-expanding vacation experiences, and responded to relationship quality measures of physical intimacy and relationship satisfaction. See Table 4 for descriptives and correlations.

Relationship length. Participants were asked how many years they have been in their current relationship. Relationship length ranged from 1 to 50 years (m = 11.41 years, sd = 11.75). Similar to Study 1, log

Table 4

Study 2 descriptive statistics and correlations (n = 204).

	Mean	SD	Gender	Re Length	Intimacy	VacN	Re Sat
Gender	1.50	0.50	-				
Lg ReLength	11.41	11.75	0.000	_			
Intimacy	64.41	28.77	0.015	-0.157*	-		
VacN	2.65	0.68	0.000	0.026	0.077	_	
ReSat	4.37	0.64	-0.052	0.135	0.451**	0.145*	_
SSelf-Expanding	59.72	23.30	0.085	-0.222^{**}	0.311**	-0.024	0.377

Note. For gender, 1 = male; 2 = female. Lg = log. Relength = relationship length in years. Intimacy = physical intimacy. VacN = number of vacations in the past year with partner. ReSat = Relationship satisfaction. SSelf-Expanding = Shared Self-Expanding Experiences on joint vacations.

^{**} p < .01.

transformations were used to better account for short-term versus longterm differences in relationship length. Log transformations were retained for analyses.

Relationship quality

Travel with partner. Participants were asked, "On your vacations in the past year, did you travel with your significant other?"; Response options were "no" or "yes." Participants who responded with "yes" were asked to indicate the total number of joint vacations taken in the previous year (Range = 2 to 4).

Shared self-expanding vacation experiences (Cronbach's $\alpha = 0.70$). At the time Study 2 data were collected, there were no existing scales uniformly assessing shared self-expanding vacation experiences during joint vacations. Study 2 data were collected by the second author when the author was unaware of Study 1 and includes a focus on shared experiences (e.g., used "we" instead of "I"). We developed and tested a scale by compiling items from the tourism literature that were related to novelty of tourism, self-expansion, and relationship outcomes of tourism. Reviewing the tourism literature and available self-expansion scales (e.g., Aron et al., 2000; Lewandowski Jr. & Aron, 2002; Muise et al., 2019), we identified two studies that focused on family and relationship rather than individual benefits of vacations. The first was a study by Fu et al. (2014) who interviewed 10 American families and extracted 21 functions/benefits of family vacations including noveltyseeking, bonding/sharing, communication, and escape/relaxation. The second study by Lehto, Fu, Li, and Zhou (2017) tested this same instrument by Fu et al. (2014) with a survey of 302 Chinese families and found the same underlying domains. In consultation with a group of tourism and self-expansion researchers we extracted four items that were similar to existing self-expansion items (e.g., "How much did being with your partner result in you having new experiences?"; Muise et al., 2019). Following suggestions by experts, we modified items to enhance readability and face validity (e.g., "We shared different opinions" to "We offered different opinions"; "We tasted authentic food" to "We tasted new food") and we omitted one item "We experienced a different culture" since not all vacations necessarily involve different cultures. We replaced this item with one novelty-seeking item originally introduced by Lee and Crompton (1992)—"We did things that were a little daring"- and added one general item ("How novel were your joint vacations overall in the past year?). The 5 items (m = 59.72, sd = 23.29) can be seen in Appendix B. Using a sliding scale ranging from 0 (Never or rarely), to 50 (About half the time), to 100 (Almost all the time) participants indicated the extent to which they engaged in a series of self-expanding experiences during all their vacations in the past year. For the five items, inter-item correlations ranged from 0.15 to 0.40, with a determinant of 0.45. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.74, exceeding the recommended minimum of 0.60 and Barlett's Test of Sphericity was significant ($X_{(10)}^2 = 157.02, p < .001$). Factor analyses indicated a single component with individual questions loading between 0.46 and 0.68 indicating further scale validity. Higher average scores of these five items indicated higher levels of shared self-expanding experiences while on vacation.

Physical intimacy (Cronbach's $\alpha = 0.78$). To measure post-vacation physical intimacy, we used two behavioral items similar to other measures of physical intimacy (e.g., Coffey, Bond, Stern, & Van Why, 2022; Muise et al., 2019). The two items were: "We had sex" and "We showed affection by kissing, touching, or holding hands." Partners were asked to think about a typical week at home and indicate on a sliding scale ranging from 0 (*Never or Rarely*), to 50 (*About half the time*), to 100 (*Almost all the time*) the extent of their physical intimacy towards each other using the two statements. Higher scores indicated more physical intimacy.

Relationship satisfaction (Cronbach's $\alpha = 0.91$). To measure relationship satisfaction, we combined 3 items of connectedness by La Guardia, Ryan, Couchman, and Deci (2000) (e.g., "When I am with my partner, I feel loved and cared about") and 5-items of relationship satisfaction (e.g. "In most ways, life with my partner is close to ideal"; Ward, Lundberg, Zabriskie, & Berrett, 2009). To be more inclusive, we modified marriage specific language (e.g., "life with my partner" instead of "married life"). Individuals indicated their level of agreement with both items using a 5-point scale (1 = *Strongly disagree* - 5 = *Strongly agree*). Higher scores by participants indicated higher levels of perceived relationship satisfaction (m = 4.36, sd = 0.64).

Study 2 results

We used multi-level modeling. Continuous predictors were mean centered (Kenny & Kashy, 2011). Relationship length was log transformed for all analyses. Initial scatterplots showed that the data met assumptions of normality and equal variances (i.e., homoscedasticity).

Looking at bivariate correlations (see Table 4), intimacy was positively correlated with shared self-expanding experiences, r = 0.31, p < .01, and not associated with number of joint vacations, r = 0.08, p = .273, while relationship satisfaction was positively associated with number of vacations. Relationship length was negatively correlated with physical intimacy, r = -0.16, p < .05, and shared self-expanding experiences on vacations, r = -0.22, p < .01. No significant multicollinearity and zero-order relationships were detected.

Physical (romantic) intimacy

Results of random intercept multi-level models for testing Hypotheses (H1c) are seen in Table 5 (outcome variable = physical intimacy). Model 1.1 with the Dyad ID as the only predictor served as the null model against which all other models were compared for significance tests. The control variable, log transformed relationship length, was then entered into Model 1.2. Following that, in Model 1.3, total vacations in the past year (i.e., VacN) was added along with shared self-expanding experiences during those vacations. In Model 1.4, an interaction of two was added and tested.

Longer relationships were found to be linked to less physical intimacy and the number of vacations was not related to intimacy. The significant and parsimonious Model 1.5 ($\chi^2(6) = 1789.95$; p < .05)

_____*p* < .05.

Table 5

Predicting romantic intimacy from joint vacation experiences of romantic cohabitating couples (H1c).

	Outcome Variable	Fixed b estimates (SE)(p)	Random Effects			LRT	
Model Predictor	Predictors		Intercepts β ₀ (σ)	Residual	ICC	Critical Value (χ^2)	
	Intimacy						
Model 1.1	Dyad ID		64.40 (2.64)	203.28	0.75	1863.06	
(Null model)							
	Intimacy						
Model 1.2	Dyad ID		80.19 (6.09)	197.81	0.72	1802.32	
(Pseudo $R^2 = 0.07$)	Rel Length	-17.83 (6.37)**				(3.84)	
	Intimacy						
Model 1.3	Dyad ID		77.44 (5.91)	198.37	0.72	1789.18	
(Pseudo $R^2 = 0.14$)	Rel Length	-14.58 (6.21)*				(5.99)	
	VacN	2.18 (2.48)					
	SE	6.17 (1.71)***					
	Intimacy						
Model 1.4	Dyad ID		77.23 (5.91)	197.81	0.72	1788.51	
(Pseudo $R^2 = 0.14$)	Log Rel Length	-14.28 (6.21)*				(3.84)	
	VacN	1.92 (2.49)					
	SE	6.15 (1.71)***					
	Interaction	1.49 (1.82)					
	(Numbers*Novel)						
	Intimacy						
Model 1.5	Dyad ID		77.15 (5.93)	198.36	0.72	1789.95	
(Pseudo $R^2 = 0.13$)	Rel Length	-14.20 (6.22)*				(5.99)	
	SE	6.15 (1.72)***					

Note. VacN = vacations with partner; Rel = relationship; Interaction = Self-Expansion X VacN; SE = Self-expansion. Relationship length was log transformed for all analyses.

_____*p < .*05.

*** *p* < .01.

p < .001.

suggested that when predicting romantic physical intimacy, couples that reported higher levels of shared self-expanding experiences also reported more physical intimacy even after accounting for relationship length.

Relationship satisfaction

To test the link between our other outcome variable, relationship satisfaction, and shared self-expanding experiences, similar multi-level models with random intercepts were calculated. Shared self-expanding experiences did not significantly predict relationship satisfaction (H1b), F(1,194) = 0.56, p = .452.

In summary, our hypothesis for physical intimacy (H1c) was supported, however, relationship satisfaction (H1b) was not.

Study 2 discussion

When looking at partners that vacationed together at least twice a year, we found that partners who reported more tourism-related shared self-expanding experiences such as trying new food together or participating in challenging activities on their vacations reported higher levels of post-vacation physical intimacy in their relationship. These findings held even after accounting for relationship length. This is notable because similar to our study, prior research has also indicated that longer relationships are linked with reduced sex and physical intimacy (e.g., Muise et al., 2019). Further, Study 2 results indicated that an increase in the number of vacations per year did not make a difference in the link between shared self-expanding experiences on vacations and physical intimacy. When predicting physical intimacy, the number and length of vacations during the year did not matter; what mattered was the higher levels of self-expanding experiences during vacations over the given year.

General discussion

This is the first empirical research to quantify (with two new scales) and link romantic partners' self-expanding (e.g., novel, exciting) experiences on vacations with their relationship quality (i.e., specifically romantic passion, physical intimacy, and relationship satisfaction) after vacations were over. Using the self-expansion model as a framework for understanding how novel and interesting vacation experiences can benefit couples, we found that individuals who engaged in more selfexpanding vacation experiences reported higher post-vacation romantic passion and relationship satisfaction, but only when they traveled with their partners. When examining both members of a couple, couples with higher levels of self-expansion on their shared vacations reported more post vacation intimacy (i.e., sex, kissing) than those with lower levels of self-expanding experiences. Notably, our findings held no matter the relationship length (1 year or 30+ years), which is important because couples universally desire to maintain passion and intimacy, yet this becomes tougher over time (Muise et al., 2019; O'Leary, Acevedo, Aron, Huddy, & Mashek, 2012). Thus, our study offers empirical evidence of the role vacations can have in building or maintaining relationship passion and intimacy. Below we detail how these findings expand our knowledge of the theory of self-expansion and family tourism.

Implications for self-expansion model, long-term romantic relationships, and tourism

Maintaining and increasing relationship quality, especially romantic passion and physical intimacy in long-term relationships is desirable yet challenging. Regularly taking self-expanding vacations may give couples the boost they are looking for in newer and long-term relationships. Study 1 findings indicated that couples who traveled together and reported high amounts of self-expanding experiences also recounted more post-vacation romantic passion and better relationship satisfaction. Study 2 findings indicated that couples who vacationed regularly together and reported more shared self-expanding experiences also had more post-vacation physical intimacy (e.g., sex and affection), a behavioral indicator of passion. Many studies have indicated that romantic passion and sexual frequency are linked to individual factors like happiness (Blanchflower & Oswald, 2004; Cheng & Smyth, 2015) and that relationship length and age are connected to decreased sexual

frequency and satisfaction for couples (Call, Sprecher, & Schwartz, 1995; Reis & Gable, 2003). Thus, vacations that involve more opportunities for self-expansion are a valuable medium for maintaining romantic relationships.

In Study 2 self-expanding experiences were not linked to relationship satisfaction, yet there are some important considerations. Notably, relationship satisfaction was very high (with limited variability) and the measure is typically stable. This ceiling effect was likely because of the sampling requirements (2+ vacations for cohabitating couples). While we might expect couples with higher relationship quality to be more likely to vacation together, we should also recognize that couples with lower satisfaction might miss chances to improve their relationship quality by vacationing less or independently. Further, in Study 2 we linked self-expanding experiences to higher rates of intimacy, which is notable given the higher rate of relationship satisfaction (which is typically associated with more intimacy). If we see these intimacy benefits in highly satisfied couples, it may be reasonable to suggest that couples with low or moderate levels of relationship satisfaction and physical intimacy could benefit even more from self-expanding experiences on vacations.

Examining self-expanding experiences in a vacation context methodologically expands on other self-expansion research. Using two newly developed scales seen in Appendix A and B, both of our studies documented that vacations offer moderate to high levels of self-expansion. Indeed, vacations as opposed to day-to-day leisure force more drastic breaks from home and work life routines and comfort zones, and last longer than prior studies of self-expansion. Thus, our initial evidence indicates vacations offer a prime context for tourism and relationship researchers to study higher levels of self-expansion occurring in selfexpanding experiences that can include many self-expanding activities. Past research has found self-expanding activities during short activities conducted in a lab or in a singular one-time activity (e.g., going on a new hike) amounting from 10 minutes to several hours are beneficial for relationships (Aron et al., 2000; Muise et al., 2019). In our studies we explored post-vacation relationship outcomes from multi-day vacations by looking at individual self-expansion and shared selfexpansion. Notably, the majority of our participants reported only one to two vacations a year meaning that many were likely reporting on vacations that were three to eleven months earlier in the year (unfortunately, time of last vacation was not measured). This long-term link is unsurprising given that one study found that couples assigned to do 90 minutes of self-expanding activities weekly for 4 weeks reported a longterm boost in relationship quality (Coulter & Malouff, 2013). In other words, our findings suggest high doses of self-expanding experiences found while traveling have detectable links to romantic quality over extended periods of time after the vacation.

As expected, there was a lot of variability in our studies on how much self-expanding experiences participants reported on their vacations, but the links to better relationship quality were strongest for those with more self-expanding experiences while traveling together. Given that relationship researchers (e.g., Aron et al., 2022; Coulter & Malouff, 2013) have linked self-expansion in much shorter activities to relationship quality for up to four months, it is feasible that couples with fewer self-expanding experiences might have reported higher relationship quality in the periods directly after their vacations had we collected data immediately after the completion of a vacation. Future research will be needed to determine how long self-expanding experiences on vacations benefits couples (and individuals), and whether regular vacations are needed as a path towards maintenance of relationship quality. Additionally, given our links between self-expanding experiences and relationship quality and knowing that close relationships (including friendships) are linked to better physical health and mental well-being (Coffey, Wray-Lake, Mashek, & Branand, 2016; Holt-Lunstad, Smith, & Layton, 2010), vacations high in self-expansion may also be linked to better mental and physical health.

Practical implications for the tourism industry

While things like novelty and challenge are reasons why people travel, different levels of familiarity and novelty are preferred at different times (Aron et al., 2022; Csikszentmihalyi & Coffey, 2017; Melton, 2017). Leisure scholars argue that familiar leisure experiences at home provide more opportunity for focused social interactions with significant others (e.g., Melton et al., 2022; Shahvali et al., 2023). However, the results of our studies showed that self-expansion sought and experienced during leisure experiences (i.e., self-expanding vacation experiences) pursued away from home by one partner can benefit one or both partners and their relationship. This offers initial evidence that self-expanding vacation experiences and a break from home and routine are vital to relationship quality as relationships age. Such experiences extend beyond a merely emotional and memorable trip and result in more meaningful vacations that connect partners with their loved ones. Notably, self-expansion occurs in many ways (e.g., novel, interesting, challenging; Muise et al., 2019); the vacation industry probably does not need to aim for extreme levels of challenge or excitement as research indicates very high levels are not beneficial and potentially problematic (e.g., Graham & Harf, 2015) such as if someone were to get injured or left feeling unsafe.

Recognizing the economic viability of family vacationers, particularly romantic couples, tourism businesses should continue to promote their self-expanding environments and experiences that stimulate individual growth, romantic passion, and the potential for physical intimacy. In our studies, self-expansion was dependent on self-expanding experiences that can be measured with our new scales, not on a specific type of vacation (e.g., beach or city trip) or vacation length. While different vacation types and destinations can offer varying degrees of novelty and familiarity, small changes to any vacation could provide more opportunities for self-expansion. In other words, as noted in the literature, self-expansion can occur in a wide range of ways such as going on an outing, learning something new, disclosing something new, working out, or planning and anticipating future experiences (e.g., Aron et al., 2022; Muise et al., 2019). Hence, as Su, Tang, and Nawijn (2021) have suggested, destination and service providers should offer novel activities couples can jointly choose from and experience, such as exposing tourists to unique cultural traditions and local cuisine. Other low-cost options could include offering a novel daily dinner discussion topic, trivia nights, or offering challenging physical (e.g., hikes) or mental activities (e.g., games) that are unique to a region. Ultimately, offering and advertising benefits of self-expanding activities may result in enhancing couples' relationship quality and vacations that are enjoyable, memorable, and meaningful. Such vacations will result in higher revisits and more positive word of mouth as couples place added value on regularly vacationing together.

Limitations and future directions

An important characteristic of measuring self-expanding experiences in this manuscript was that we measured subjective experiences in mixed-sex couples. Studying experiences of both partners separately in a dyadic design study, as done in Study 2, is a common best practice in relationship research yet extremely rare in tourism literature. For quantifying such subjective experiences, we based our scales on an extensive review of tourism and relationship research, and consulted a number of experts in self-expansion research. That being said, we suggest doing additional qualitative research to uncover more about how self-expansion during vacations for couples and other close relations (e. g., relatives, friends) can benefit their relationship quality, health, and well-being. Further, we did not examine same-sex or other sexualminority couples specifically although there were likely some in Study 1. We expect self-expansion on vacations and in other contexts would have similar benefits for same-sex or other sexual-minority couples. Although same-sex families travel and are targeted more inclusively by

the tourism industry, this is an under researched domain where more work is needed (Hughes & Southall, 2012). Such research would also boost understanding of self-expansion in sexual-minority populations.

We used cross-sectional quasi-experimental designs which prevented causal examination of our variables. Participants were asked to reflect on their past vacation experience(s) and focus on the current state of their relationship that may indicate temporal precedence but not a causal link. Although random assignment may seem challenging in a vacation context, a basic design might ask the treatment group--couples-to plan more self-expanding experiences on their next vacation (see Coulter & Malouff, 2013, for a similar but non-vacationbased design). Similarly, this design might allow for emotion arousal and valence levels using physiological measures during self-expanding leisure and vacation activities (see Li, Chark, Bastiaansen, & Wood, 2023, for a review of ways to apply neuroscience methods in tourism). Another important test would be to examine the same couples after vacations when they traveled together and when they did not travel together to see what combination of individual/couple/friend/grouptravels would be best for romantic partners at different stages of their relationship. Such experiments would uncover causal relationships between self-expanding vacation experiences and relationship quality. Further, to parse out the direct causal effect of self-expanding experiences, tourism research would gain from measuring individual and shared self-expansion, actor and partner experience and relationship indicators, and individual well-being before, during, and after vacations are completed.

Conclusion

Traveling away from regular activities in life and experiencing different degrees of novelty is core to all vacation experiences, and is often overlooked as an attribute that likely explains many of the benefits and excitement generated by vacations for individuals and couples. Our studies are among the first to measure self-expanding vacation experiences and provide empirical support for the link between vacationing and better relationship quality even after the vacation ends. We found that couples who do more new, interesting, challenging, and exciting things together while on vacation (i.e., self-expanding experiences) report higher romantic passion and physical intimacy after vacations have ended. Self-expanding experiences happen in many ways and situations that do not have to be complex, costly, or complicated when new, interesting, adventurous, romantic, and humorous experiences will do (e.g., Aron et al., 2022; Graham, 2008; Reissman et al., 1993). The tourism industry can capitalize on our research by providing and promoting an array of self-expanding activities for different market segments. This would likely fuel word-of-mouth advertising, positive reviews, and return visits. Although future studies should seek to replicate and extend our findings with other designs some of which are listed above, we now have empirical evidence that vacations serve an important role in the long-term health and maintenance of romantic relationships.

CRediT authorship contribution statement

John K. Coffey: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Writing – original draft, Writing – review & editing. Moji Shahvali: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Writing – original draft, Writing – review & editing. Deborah Kerstetter: Conceptualization, Investigation, Writing – original draft, Writing – review & editing. Arthur Aron: Conceptualization, Methodology, Writing – original draft, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.annale.2024.100121.

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