

ORIGINAL ARTICLE

Posttraumatic growth and life course stress predict dyadic wellbeing among sexual and gender minority (SGM) and non-SGM couples facing cancer

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Funding information

American Psychological Foundation Roy Scrivner Memorial Research Grant; National Institute of Nursing Research T32 Training Program in Cancer, Caregiving, and End of Life, Grant/Award Number: T32NR013456; Sigma Theta Tau International Honor Society of Nursing Gamma Rho Chapter; National Center for Advancing Translational Sciences of the National Institutes of Health, Grant/Award Number: UL1TR002538

Abstract

Objective: This study examined: (1) Differences among sexual and gender minority (SGM) and non-SGM couples' life course stress, posttraumatic growth (PTG), individual, and dyadic wellbeing while facing cancer, (2) The predictive ability of PTG and life course stress on wellbeing for each dyad member, and (3) The predictive ability of dyad-level PTG and dyad-level life course stress on dyadic wellbeing.

Methods: Thirty SGM and 30 non-SGM dyads ($N = 60$) completed measures assessing demographics, life course stress, PTG, individual, and dyadic wellbeing. Regression and multilevel models tested predictive hypotheses.

Results: Participants were 56.3 years old on average ($SD = 13.6$) and were together for 24.2 ($SD = 14.9$) years. SGM participants reported greater life course stress and higher scores on the Depression, Anxiety, and Stress Scales (DASS-21) than non-SGM participants. A dyad members' higher PTG predicted their partners' higher DASS-21 score, dyad members' higher life course stress predicted their own higher DASS-21 score, and patients' higher life course stress predicted their partners' higher DASS-21 score. Greater dyadic PTG predicted greater dyadic wellbeing.

Conclusions: SGM and non-SGM couples experience PTG equally despite SGM couples' greater life course stress and higher DASS-21 scores. Future research is needed to explore how PTG may affect individuals and couples differently.

KEYWORDS

cancer, caregivers, dyadic, LGBTQ+, oncology, posttraumatic growth, psycho-oncology, sexual and gender minorities, stress

1 | INTRODUCTION

A diagnosis of cancer can be life-altering and result in psychological distress such as depression, anxiety, and symptoms of posttraumatic stress for both patients and their partners.^{1,2} In addition to individual risks, the stress of one partner can affect the other,³ decreasing marriage satisfaction and relationship functioning.^{4,5} However, posttraumatic growth (PTG)—positive psychological change occurring through the struggle with a highly stressful or traumatic event⁶—is

reported by both cancer patients and their partners. PTG is associated with lower long-term levels of distress, depression, anxiety, and better overall wellbeing, suggesting it may buffer the negative psychological effects of cancer.⁷ The domains of PTG include personal strength, new possibilities, appreciation of life, relating to others, and spiritual/existential change.⁸

In couples, each member's psychological processes may affect the other dyad member as well as their relationship.^{9,10} Previous studies demonstrate positive correlations between cancer patients

and partners' symptoms of posttraumatic stress,¹¹ PTG,¹² and well-being.⁹ Couples who see cancer as a joint stressor and cope together report greater dyadic wellbeing and better adjustment to cancer.⁴ Thus, a couple's PTG and stress are likely associated with their dyadic wellbeing.

Growing concern regarding how cancer may affect couples calls for dyadic research on how to best foster positive psychological outcomes for both dyad members and the relationship. Couples where one or both partners identify as lesbian, gay, bisexual, transgender, queer, or some other sexual or gender minority (SGM) (LGBTQ+)¹³ have primarily been overlooked in psycho-oncology research. Some studies find associations between negative psychological outcomes and SGM cancer survivors for only specific minority subgroups and not others.^{14,15} Research including SGM populations primarily focuses on breast or prostate cancer, excludes transgender or genderqueer participants, and has inconsistent findings across studies.¹⁶

SGM populations may experience minority stressors such as stigma, discrimination, rejection, and other stressors related to belonging to a historically disadvantaged or stigmatized minority. Minority stress places these individuals at an increased risk for mental health issues such as depression, anxiety, and suicidality.¹⁷ Paradoxically, minority stress may also lead to positive psychological outcomes such as resilience¹⁸ and PTG.¹⁹

The minority stress model stems from the theory of stress and coping wherein an individual faced with a stressor appraises it, evaluates their ability to deal with it, and engages in coping such as cognitive and behavioral efforts.²⁰ Resilience and PTG can be seen as coping as they can buffer the deleterious effects of stress on health. Resilience suggests being able to easily adapt to stress and regain one's original functioning whereas PTG suggests positive changes beyond one's original functioning.⁶ In sum, minority stress—and stress theory more broadly—describes how individuals experience stress, appraise it, and either experience negative or positive psychological outcomes.

The theory of stress and coping along with prior research guided the following hypotheses: H1) SGM and non-SGM couples will differ in life course stress, PTG, individual, and dyadic wellbeing, H2) Each individual's PTG will predict their own and their partner's wellbeing, H3) Each individual's life course stress will predict their own and their partner's wellbeing, H4) Dyad-level PTG and dyad-level life course stress will predict dyadic wellbeing.

2 | METHODS

A community advisory board (CAB) consisting of six individuals was convened before recruitment. Three CAB members were professionals in cancer care, one was an expert in LGBTQ+ aging, and two were community members. Of the six, three individuals self-identified as LGBTQ+ and one was a cancer survivor. The CAB provided feedback on study documents, procedures, vocabulary used in recruitment materials, and dissemination methods.

The University of Utah Institutional Review Board reviewed and approved all procedures (IRB #00133699) and informed consent was obtained for all participants. Eligible couples included at least one member who self-reported being diagnosed with cancer by a medical professional. Partners were defined as significant others who provided patients with some level of support, and SGM couples included at least one person who identified as LGBTQ+. Nonproportional quota sampling ensured all eligible SGM and non-SGM couples were enrolled until targeted enrollment was achieved with the sample being equally represented by each group.

Recruitment included: (1) using ResearchMatchTM (a national health volunteer registry),²¹ relevant listservs and social media sites, and sharing information with community organizations and other contacts, (2) emailing patients identified in electronic medical records of a comprehensive cancer center, and (3) word of mouth. The CAB and cancer center staff shared study information with interested individuals. Each participant was compensated with a \$20 electronic gift card for completing all surveys.

3 | TARGETED ENROLLMENT

Power analysis software G*Power, determined 76 individuals were needed to detect a medium effect size of $f^2 = 0.19$ with 80% power at $\alpha = 0.05$.²² Given the dyadic nature of the study, sample size was adjusted to account for assumed dependence of $r = 0.3$ between partners, yielding a minimum sample size of 108 individuals or 54 couples. Potential participants received information about the study and if interested, completed an eligibility questionnaire administered via REDCap.²³

4 | DATA COLLECTION

4.1 | Demographics

Data was collected between November 2020 and June 2021. Demographic and health characteristics (see Table 1) collected from each member of the dyad included gender (male, female, genderqueer, non-binary, transgender male, transgender female) and sexual orientation (heterosexual, gay, lesbian, bisexual, or some other sexual orientation as written in free-text by participants).

4.2 | Predictors

PTG was measured using the Posttraumatic Growth Inventory-Expanded (PTGI-X) consisting of 25 items assessing the extent of change experienced due to a highly stressful or traumatic event.²⁴ The PTGI-X has a documented internal consistency of $\alpha = 0.97$ and was also 0.97 in the current study. Life course stress was measured by the Trauma and Loss Spectrum (TALS)-Self Report Lifetime

TABLE 1 Demographic and health characteristics

Variables		Non-SGM (n = 60)	SGM (n = 60)	Total (N = 120)
Age	M (SD), range	60.8 (12.1), 34–77	51.7 (13.5), 22–79	56.3 (13.6), 22–79
Gender	Male	n = 30 (50%)	n = 15 (25%)	n = 45 (37.5%)
	Female	n = 30 (50%)	n = 40 (66.7%)	n = 70 (58.3%)
	Gender queer/non-binary	-	n = 5 (8.3%)	n = 5 (4.2%)
	Transgender male	-	n = 4 (6.7%)	n = 4 (3.3%)
	Transgender female	-	n = 1 (1.7%)	n = 1 (0.83%)
Sexual orientation	Heterosexual	n = 60 (100%)	n = 1 (1.7%)	n = 61 (50.8%)
	Gay	-	n = 11 (18.3%)	n = 11 (9.2%)
	Lesbian	-	n = 37 (61.7%)	n = 37 (30.8%)
	Bisexual	-	n = 7 (11.7%)	n = 7 (5.8%)
	Something else	-	n = 4 (6.7%)	n = 4 (3.3%)
Race	Caucasian	n = 56 (93.3%)	n = 50 (83.3%)	n = 106 (88.3%)
	Black	-	n = 5 (8.3%)	n = 5 (4.2%)
	Other	n = 4 (6.7%)	n = 4 (6.7%)	n = 8 (6.7%)
Religion	Catholic	n = 6 (10%)	n = 5 (8.3%)	n = 11 (9.2%)
	Jewish	n = 7 (11.7%)	n = 2 (3.3%)	n = 9 (7.5%)
	LDS	n = 25 (41.7%)	-	n = 25 (20.8%)
	Protestant	n = 6 (10%)	n = 2 (3.3%)	n = 8 (6.7%)
	Unaffiliated	n = 9 (15%)	n = 40 (66.7%)	n = 49 (40.8%)
Education	Less than college	n = 2 (3.3%)	n = 4 (6.7%)	n = 6 (5%)
	Some college/technical training	n = 21 (35%)	n = 10 (16.7%)	n = 31 (25.8%)
	College graduate	n = 21 (35%)	n = 15 (25%)	n = 36 (30%)
	Post-grad/professional degree	n = 16 (26.7%)	n = 30 (50%)	n = 46 (38.3%)
Income	≤\$24,999	n = 7 (11.7%)	n = 10 (16.7%)	n = 17 (14.2%)
	\$25,000–\$74,999	n = 28 (46.7%)	n = 23 (38.3%)	n = 51 (42.5%)
	≥\$75,000	n = 24 (40%)	n = 27 (45%)	n = 51 (42.5%)
Relationship status	Married	n = 58 (96.7%)	n = 46 (76.7%)	n = 104 (86.7%)
	Civil union/partnership	n = 2 (3.3%)	n = 8 (13.3%)	n = 10 (8.3%)
	Divorced/separated/single	-	n = 6 (10%)	n = 6 (5%)
Years together	M (SD), range	31.3 (14.5), 3–51	16.8 (11.3), 3–44	24.2 (14.9), 3–51
Mental health diagnoses	Anxiety	n = 14 (23.3%)	n = 24 (40%)	n = 38 (31.7%)
	Depression	n = 17 (28.3%)	n = 25 (41.7%)	n = 42 (35%)
	Other	-	n = 12 (20%)	n = 12 (10%)
Other chronic illness		n = 26 (43.3%)	n = 22 (36.7%)	n = 48 (40%)

(Continues)

TABLE 1 (Continued)

Patient cancer characteristics				Total n = 60
Cancer type	Bladder	n = 1 (3.3%)	-	n = 1 (1.7%)
	Breast	n = 4 (13.3%)	n = 5 (16.7%)	n = 9 (15%)
	Gastrointestinal	n = 6 (20%)	n = 1 (3.3%)	n = 7 (11.7%)
	Head and neck	n = 1 (3.3%)	n = 1 (3.3%)	n = 2 (3.3%)
	Hematological	n = 1 (3.3%)	n = 2 (6.7%)	n = 3 (5%)
	Lung	n = 3 (10%)	n = 1 (3.3%)	n = 4 (6.7%)
	Neurological	-	n = 1 (3.3%)	n = 1 (1.7%)
	Prostate	n = 3 (10%)	n = 1 (3.3%)	n = 4 (6.7%)
	Sarcoma	n = 1 (3.3%)	n = 2 (6.7%)	n = 3 (5%)
	Skin	n = 5 (16.7%)	n = 3 (10%)	n = 8 (13.3%)
	Other	n = 11 (36.7%)	n = 11 (36.7%)	n = 22 (36.7%)
Cancer stage	Stage I	-	n = 5 (16.7%)	n = 5 (8.3%)
	Stage II	n = 1 (3.3%)	n = 3 (10%)	n = 4 (6.7%)
	Stage III	n = 5 (16.7%)	n = 8 (26.7%)	n = 13 (21.7%)
	Stage IV	n = 18 (60%)	n = 4 (13.3%)	n = 22 (36.7%)
Cancer prognosis	<6-12 months	n = 1 (3.3%)	n = 2 (6.7%)	n = 3 (5%)
	>12 months	n = 4 (13.3%)	n = 15 (50%)	n = 19 (31.7%)
Time since diagnosis	<6-12 months	n = 9 (30%)	n = 6 (20%)	n = 15 (25%)
	>12 months	n = 23 (76.7%)	n = 18 (60%)	n = 41 (34.2%)

Version ($\alpha = 0.95$ in this study) which assesses stress across the lifespan via 116 items. Intraclass correlation coefficients range between 0.934 and 0.994 for each domain. The Cohen's kappa for each item ranges from 0.49 to one, with an average of 0.89, indicating high levels of agreement at the item level.²⁵

4.3 | Dependent variables

The Depression Anxiety Stress Scale (DASS-21) which contains 21 items and three subscales measuring depression ($\alpha = 0.94$), anxiety ($\alpha = 0.91$) and stress ($\alpha = 0.87$), was utilized as a proxy measure for individual wellbeing (higher DASS-21 indicating lower wellbeing).²⁶ To measure dyadic wellbeing, both members of a couple completed the Couples Satisfaction Index (CSI)²⁷—a 16-item scale measuring couples' relationship satisfaction ($\alpha = 0.98$). The Dyadic Coping Inventory (DCI) measured couples' adjustment to dyadic stress²⁸ using a 37-item instrument ($\alpha = 0.95$).²⁹ Participants also completed the Positive and Negative Quality of Marriage Scale (PANQIMS), which contains six items measuring positive ($\alpha = 0.89$) and negative ($\alpha = 0.90$) aspects of the relationship.³⁰ A composite variable representing dyadic wellbeing was created by summing scores from the CSI, DCI, and positive PANQIMS scale and subtracting the negative PANQIMS score for each participant ($\alpha = 0.96$).

5 | DATA ANALYSIS

For descriptive purposes, SPSS version 27 software was utilized to run independent samples t-tests and chi-square tests of independence for differences in demographic and health characteristics between SGM and non-SGM groups.³¹ Hypothesis 1 (H1) utilized 2×2 mixed-effect ANOVAs to examine differences between SGM and non-SGM couples' scores on all validated surveys. To test the ability of PTG (H2) and life course stress (H3) to predict individual wellbeing, Actor Partner Interdependence Models (APIMs) were used to conduct inferential tests of individual-level associations between variables.³²

APIMs account for analyzing associations between each partner's variables and associations across partners' variables while adjusting standard error estimates for statistical dependence between partners.³² In APIMs, actor effects occur when one individual's score on a predictor variable affects that same individual's score on an outcome variable and partner effects occur when one individual's score on a predictor variable affects their partner's score on an outcome variable.³² APIM models contained individual-level patient and partner variables. Analyses were run in HLM Version 8.1.³³ APIMs examined mixed independent variables which can vary both within and between dyads.³² To more fully disambiguate effects of each predictor due to individual life course stress and PTG scores

from those due to differences across couples, post-hoc contrast tests were conducted.

To test hypothesis 4 (H4), that dyad-level PTG and dyad-level life course stress predict dyadic wellbeing, a regression model was tested via path analysis (using SPSS software). H4 examined between-couple associations by averaging a couple's scores on the PTGI-X, TALS-SR, and the composite variable for dyadic wellbeing. The following variables were tested as covariates in all models: age, duration of couples' relationship, length of time since diagnosis, stage of cancer, patient's expected prognosis, and prior mental health diagnoses. All models presented here include these covariates (and therefore control for them), even though they did not change any outcomes.

6 | RESULTS

6.1 | Demographic and health characteristics

The final sample consisted of $N = 120$ participants (60 patient-partner dyads), half of which were SGM (see Table 1). Participants identified as heterosexual ($n = 61$, 50.8%), lesbian ($n = 37$, 30.8%), gay ($n = 11$, 9.2%), bisexual ($n = 7$, 5.8%), or provided written responses describing other sexual orientations ($n = 4$, 3.3%). Participants were female ($n = 70$, 58.3%), male ($n = 45$, 37.5%), gender non-binary or gender queer ($n = 5$, 4.2%), transgender male ($n = 4$, 3.3%), and transgender female ($n = 1$, 0.83%). The mean age of participants was 56.3 ($SD = 13.6$). Participants were primarily white ($n = 106$, 88.3%) and unaffiliated with any religion ($n = 49$, 40.8%). Most were legally married ($n = 104$, 86.7%) and had been together for an average of 24.2 years (Range = 3–51, $SD = 14.9$). Approximately one-third of cancer patients were diagnosed over a year ago ($n = 41$, 34.2%), had stage IV cancer ($n = 22$, 36.7%), and had a prognosis of over 12 months ($n = 19$, 31.7%). Cancer patients reported the following types of cancer: breast ($n = 9$, 15.0%), skin ($n = 8$, 13.3%) gastrointestinal ($n = 7$, 11.7%), prostate ($n = 4$, 6.7%), lung ($n = 4$, 6.7%), hematological ($n = 3$, 5.0%) sarcoma ($n = 3$, 5.0%), head and neck ($n = 2$, 3.3%), bladder ($n = 1$, 1.7%), neurological ($n = 1$, 1.7%), or other ($n = 22$, 36.7%).

6.2 | SGM versus non-SGM demographic comparisons

SGM couples were younger (SGM $M = 51.7$, $SD = 13.5$ vs. non-SGM $M = 60.8$, $SD = 12.1$; $t(118) = 3.88$, $p < 0.001$), reported fewer years in their relationships (SGM $M = 16.8$, $SD = 11.3$ vs. non-SGM $M = 31.3$, $SD = 14.5$; $t(118) = 6.07$, $p < 0.001$), and were less likely to be married than non-SGM participants ($\chi^2(3, N = 120) = 10.98$, $p = 0.012$). SGM participants were more likely to self-report prior mental health diagnoses than non-SGM participants ($\chi^2(1, N = 120) = 4.89$, $p = 0.027$). Non-SGM participants ($n = 18$, 60%) with cancer were more likely to report stage IV cancer ($\chi^2(4,$

$N = 56) = 16.1$, $p = 0.003$), than SGM participants ($n = 4$, 13.3%), which may reflect the decision to open eligibility to individuals with any stage of cancer given initial difficulties recruiting a sufficient sample size of SGM couples. SGM and non-SGM groups were not different in race, income, presence of other chronic illnesses, cancer type, time since diagnosis, past or current cancer treatment.

6.3 | Hypothesis 1 results

There were no differences ($F(1) = 0.744$, $p = 0.392$) between SGM and non-SGM groups on the PTGI-X. Controlling for whether individuals were patients or partners, SGM participants reported greater TALS-SR scores ($F(1) = 26.54$, $p < 0.001$, SGM $M = 45.9$, $SD = 20.9$ vs. non-SGM $M = 25.8$, $SD = 14.8$). SGM participants scored higher on the DASS-21 than non-SGM participants, indicating lower wellbeing ($F(1) = 5.91$, $p = 0.018$; SGM $M = 16.2$, $SD = 11.8$ vs. non-SGM $M = 11.1$, $SD = 8.6$). There were no other differences in survey scores between SGM and non-SGM groups.

6.4 | Hypothesis 2 results

Running tests of distinguishability in DINGY, a dyadic analysis web program,³⁴ demonstrated means for each variable were unequal ($\chi^2(7, 60) = 31.56$, $p < 0.001$), confirming patients and partners were distinguishable members of a dyad. The intraclass correlation coefficient was 0.27, demonstrating 27% of variance in individual wellbeing was between and 73% of variance was within couples. The PTGI-X demonstrated a predictive partner effect on the DASS-21; For every one unit increase in PTGI-X score, there was a 0.09 unit increase in DASS-21 score ($\beta = 0.09$, $p = 0.002$) (see Figure 1).

6.5 | Hypothesis 3 results

There was a predictive actor effect such that every one unit increase in TALS-SR score (measuring life course stress) resulted in a 0.20 unit increase in a dyad member's own DASS-21 score ($\beta = 0.20$, $p < 0.001$) (see Figure 2). Post-hoc tests demonstrated a partner effect for cancer patients only—a patient's one unit increase in TALS-SR score resulted in an 0.13 unit increase in their partner's DASS-21 score ($\beta = 0.13$, $p = 0.034$). While the duration of a couple's relationship did not influence actor or partner paths, for every unit increase in years together, there was a 0.15 unit decrease in DASS-21 score ($\beta = 0.15$, $p = 0.002$).

6.6 | Hypothesis 4 results

Results from regressing dyad-level wellbeing (the average of each partner's composite variable) onto dyad-level PTG and dyad-level life

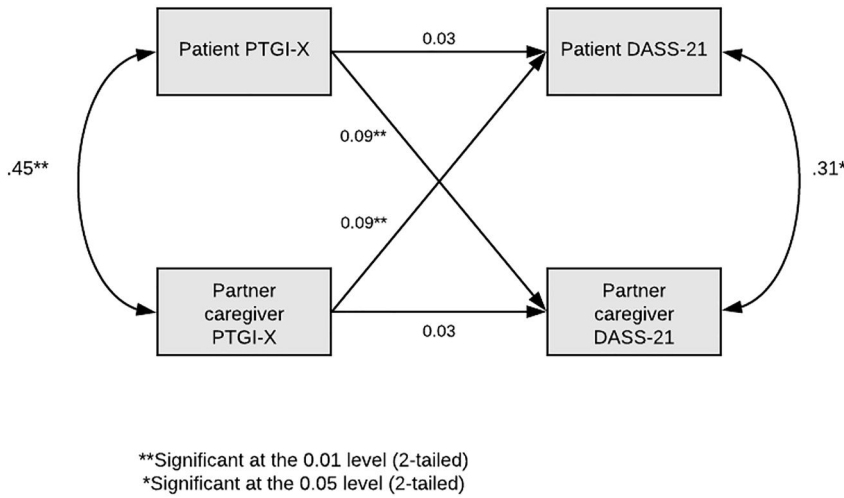


FIGURE 1 Hypothesis 2 Actor Partner Interdependence Models

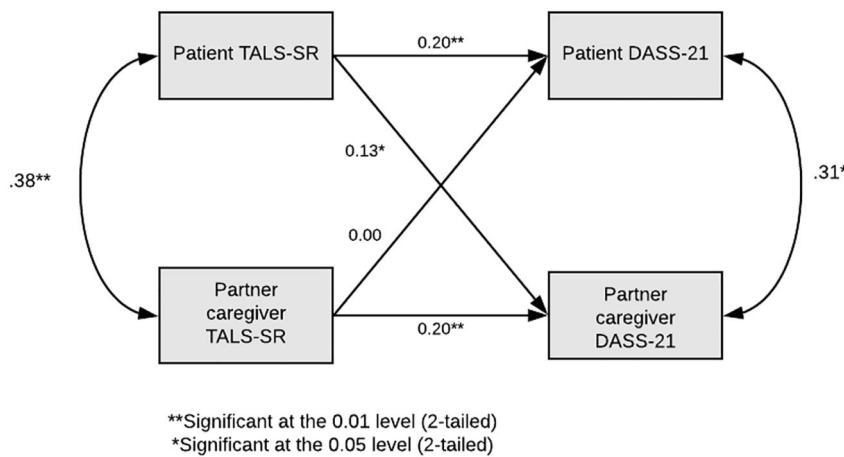


FIGURE 2 Hypothesis 3 Actor Partner Interdependence Models

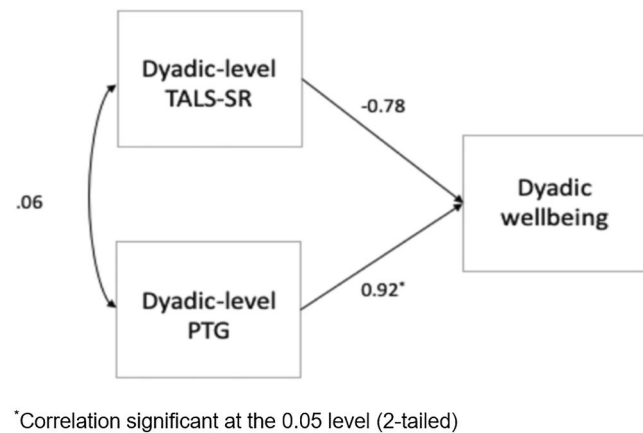


FIGURE 3 Hypothesis 4 regression model of dyad-level variables

course stress demonstrated $R^2 = 0.62$, meaning 62% of variance in dyadic wellbeing could be predicted from the combination of PTG and life course stress ($SE = 34.8$). For every one-unit increase in PTG, there was a 0.92 unit increase in the predicted score of dyadic wellbeing ($p = 0.038$). For every unit increase in life course stress,

there was a -0.78 decrease in the predicted score of dyadic wellbeing ($p = 0.335$) (see Figure 3). These outcomes were not different when examining SGM and non-SGM groups separately. When controlling for life course stress, PTG accounts for 28% (0.53^2) of variance in dyadic wellbeing.

7 | DISCUSSION

Results from this study raise novel questions in the exploration of how PTG develops and is influenced by partners facing cancer. While preliminary, findings illuminate the importance of including SGM populations in psycho-oncology research. The results force researchers and providers alike to consider an individual's relationship status and life course stress (including minority stress), as both play a role in determining stress appraisal, coping, and ultimately, psychological outcomes.

In this study, as with prior caregiving research, SGM participants were more likely to report previous mental health diagnoses and higher life course stress scores than non-SGM participants.³⁵ The fact that SGM participants experienced PTG equally could therefore suggest resilience and warrants future research.

While small in magnitude, each dyad member's higher life course stress predicted their lower wellbeing, patients' higher life course stress predicted partners' lower wellbeing, but partners' life course stress did not predict patients' lower wellbeing. This may indicate that more attention is given to cancer patients than to partners.³⁶ Partners may also protect patients from their own personal stress and therefore patients remain unaffected by their partner's life course stress. Being in a relationship for longer may also be protective against depression, anxiety, and stress while facing cancer, as is demonstrated in prior research.³⁷

The finding that one partner's PTG was not associated with their own worse depression, anxiety and stress but had a small effect on their partner's and that dyad-level PTG had a large effect on dyadic wellbeing, could suggest that separate from any intrapersonal processes of disruption to core beliefs and rumination post-trauma, interpersonal processes between dyad members fosters mutual PTG.³⁸ Dyad members may perceive their partner as being more responsive which can facilitate the sharing of difficult feelings. Disclosing challenging thoughts and feelings can result in PTG for the person disclosing but may cause the other to recognize their own depression, anxiety, and stress; Attention is needed to tailor support of cancer patients to their relationship circumstances; specific interventions may be needed for partnered cancer patients to ensure both dyad members benefit.

8 | STUDY LIMITATIONS

As this study was a one-time survey, causality cannot be inferred. The sample was mostly white, middle to high income, and highly educated and therefore may not be generalizable beyond similar groups. The SGM sample was primarily lesbian, also limiting generalizability. Despite potential differences in experiences of sexually and gender diverse individuals, subgroup analyses by sexual orientation and gender identity were not possible due to small subgroup sizes. Models did not examine gender effects and differing gender combinations within dyads. Similarly, a dyad's mean score does not allow for comparisons of agreement between partners on dyadic measures. Data collection may be influenced by COVID-19 which could have affected outcomes. Finally, the PTGI-X was designed for individual use and may not capture the intimate experience of facing cancer as a couple. However, to our knowledge, this is the first dyadic study of PTG to include SGM couples facing cancer and demonstrates PTG may positively influence dyadic wellbeing.

9 | CLINICAL IMPLICATIONS

The study finding that PTG may be more influential on wellbeing when considered in relationships affirms the need to tailor psychosocial assessments and interventions to couples and better integrate partners into routine cancer care. While a family focus is a goal in many health care settings, cancer patients remain the primary focus

which overlooks partners' psychosocial wellbeing.³⁶ Since the duration of a couple's relationship positively influences each partner's wellbeing, focusing on relationship satisfaction may improve psychological outcomes. However, study findings may not be clinically meaningful given that the DASS-21 does not provide clinical diagnoses and the composite variable for dyadic wellbeing combined measures from different constructs.

10 | CONCLUSION

In conclusion, this study raises questions regarding how and why PTG functions differently within couples than individuals and begs for future research into how prior life course stress may affect couples' current coping with cancer. Future dyadic research could use longitudinal methods to examine temporal relationships between PTG and wellbeing and fluctuations over time. With expected increases in cancer diagnoses³⁹ and the estimated doubling of LGBTQ+ adults ages 50 and older by 2030,⁴⁰ it is critical to develop evidence-based interventions fostering positive psychological outcomes among SGM and non-SGM couples facing cancer.

ACKNOWLEDGMENTS

Funding was provided by American Psychological Foundation Roy Scrivner Memorial Research Grant, National Institute of Nursing Research T32 Training Program in Cancer, Caregiving, and End of Life (T32NR013456), and Sigma Theta Tau International Honor Society of Nursing Gamma Rho Chapter. The research reported in this publication was supported in part by the National Center for Advancing Translational Sciences of the National Institutes of Health under Award Number UL1TR002538. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

CONFLICT OF INTEREST

The authors have no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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How to cite this article: Bybee S, Cloyes KG, Mooney K, Supiano KP, Baucom BRW, Ellington L. Posttraumatic growth and life course stress predict dyadic wellbeing among sexual and gender minority (SGM) and non-SGM couples facing cancer. *Psychooncology*. 2022;1-9. <https://doi.org/10.1002/pon.6036>