

Unmitigated Agency, Social Support, and Psychological Adjustment in Men With Cancer

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ABSTRACT Unmitigated agency (UA), a gender-linked characteristic, has been associated with poorer cancer adjustment. Support from one's social network typically predicts adjustment but may be poorly matched to UA. The influence of UA on the utility of social support on adjustment over time is examined. Men with cancer ($N = 55$) were assessed initially and 6 months later on three indicators of adjustment. Multilevel modeling analyses varied by adjustment indicator. UA was associated with increased cancer-related psychosocial symptoms but not depressive symptoms or cancer-related thought intrusion. Social support predicted fewer depressive symptoms and less cancer-related thought intrusion. However, a cross-level interaction revealed that the utility of social support on cancer-related thought intrusion was weaker for men with greater levels of UA. Men with cancer likely respond differently to changes in social support depending on their endorsement of UA.

Unmitigated agency has received recent attention in the empirical literature and refers to a set of negative agentic personality traits characterized by focusing on oneself to the point of exclusion of other people. Linked to stereotypical notions of masculinity and the male gender role (Abele, 2003; Bakan, 1966; Helgeson & Fritz, 2000), it has been construed as a constellation of traits such as greed, hostility, and arrogance that reflects both self-absorption (e.g., egotistical, greedy) and a negative orientation toward others (e.g., cynical, hostile; Spence, Helmreich, & Holahan, 1979). Unlike agency, which has

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been identified as a positive gender-linked trait with benefits to mental and physical health (Bassoff & Glass, 1982; Danoff-Burg, Mosher, & Grant, 2006; Helgeson & Lepore, 1997; Holahan & Spence, 1980), unmitigated agency has evidenced a negative relationship with mental health, including higher levels of depressive symptoms and more substance use (Bruch, 2002; Danoff-Burg et al., 2006; Helgeson & Fritz, 1999). Unmitigated agency also has relevance to physical health, particularly within the context of chronic illness, in its demonstrated link to cardiovascular risk factors (Helgeson, 1990) and decrements in physical functioning and health-related quality of life in men with prostate cancer (Helgeson & Lepore, 1997, 2004). Further, unmitigated agency is related to maladjustment in women with breast cancer (Piro, Zeldow, Knight, Mytko, & Gradishar, 2001).

The impact of one's social environment on health and health-related distress has been extensively examined in the psychological literature (see Taylor, 2007, for a review). Social support affects adjustment through a number of physiological, affective, and cognitive pathways (Wills & Fegan, 2001). It can also assist individuals in effectively coping with cancer by offering a better understanding of the problem and increasing motivation to take more adaptive action. Sound social support has also been found to partially explain trajectories of psychological adjustment in breast cancer patients (e.g., Helgeson, Snyder, & Seltman, 2004). In studies with cancer patients, the social environment has been operationalized in a variety of ways, including actual and perceived provision of emotional and instrumental support (e.g., Bloom & Kessler, 1994), supportive and unsupportive responses to cancer (e.g., Manne & Schnoll, 2001), constraints in one's interpersonal environment to the provision of support (e.g., Lepore & Helgeson, 1998; Zakowski, Ramati, Morton, Johnson, & Flanigan, 2004), and by the number of social roles one fulfills (e.g., Funch & Marshall, 1983). Although the majority of studies have typically assessed social support as a fairly static characteristic of an individual's social environment, it may change over time. In fact, changes in social support can have a dynamic relationship with adjustment to chronic illness (Alferi, Carver, Antoni, Weiss, & Durán, 2001; Moyer & Salovey 1999).

Although a salutary effect of social support on adjustment and health-related quality of life has been a consistent finding in health psychology research, some theoretical and empirical work has also connected social support to unfavorable outcomes such as

diminishment in self-esteem and increased negative affect in cancer patients (Lepore, Glaser, & Roberts, 2008; Rowland, 1989). Perceptions of threat to one's independence, or sense of invulnerability, have been considered as possible explanations of such findings. The degree to which perceptions of support are matched to an individual's preferences and needs may be critical to the utility of support to adjustment (Cutrona & Russell, 1990). Such possibilities indicate the need to identify individual difference factors that condition the impact of social support. For instance, Molton and colleagues (2008) identified interpersonal sensitivity as one factor that might influence men's adjustment to cancer. They determined that men who are more sensitive to their interpersonal environment are also more likely to perceive sexual side effects associated with prostate cancer treatment as a threat to core masculinity.

Gender-related traits such as instrumentality or emotional expressiveness likely affect how an individual uses coping resources (e.g., social support) when facing a significant life event such as cancer. Enactment of the traditional male gender role, such as behaviors consistent with self-reliance and determined independence, may be poorly matched to adaptive responses to some aspects of the cancer experience, particularly those involving social exchange (Hoyt, 2009). By definition, unmitigated agency represents a preference for interpersonal disengagement that might be at odds with offers of assistance and emotional support that individuals facing a chronic illness often receive and that are typical components of psychosocial or behavioral interventions for cancer patients (e.g., Spiegel & Diamond, 2001). In fact, Helgeson and Lepore (2004) found that unmitigated agency was related to lower levels of social resources (e.g., supportive social exchanges) over time. Unmitigated agency may also affect one's willingness to accept or seek help from others, as men high in unmitigated agency may be less able to distinguish circumstances in which support or assistance is needed. Such effects would likely impact the cancer patient's utilization of and receptivity to social support and ultimately his long-term adjustment to cancer.

The Current Study

Psychological adjustment to cancer may in part reflect the unfolding of interpersonal, as well as intrapersonal, factors. Thus, the current study proposes a moderating hypothesis and examines the possibility that

unmitigated agency affects the impact of available social support over time on adjustment. Psychological adjustment to chronic illness has typically been considered as a multifaceted construct that has included appraisal of well-being and positive quality of life, absence of psychopathology, and performance of adaptive disease-related behaviors (see Stanton, Revenson, & Tennen, 2007). Psychological adjustment to cancer has commonly been assessed by both general (e.g., symptoms of depression and anxiety) and cancer-specific (e.g., presence of negative intrusive thoughts about cancer) measures of distress. Although adjustment can also be indicated by positive dimensions (e.g., positive affect), presence of depressive symptoms, intrusive thoughts related to cancer, and cancer-related psychosocial difficulties were utilized in the current study to assess psychological adjustment.

The aim of this study was to examine the relationships between a gender-related dispositional characteristic (i.e., unmitigated agency), perceived social support over a 6-month period, and indicators of psychological adjustment to cancer in men. Specifically, we hypothesized that men with cancer who report more unmitigated agency will have poorer adjustment (i.e., higher levels of depressive symptoms, more cancer-related intrusive thoughts, and more psychosocial concerns related to cancer) over time; and those who perceived greater social support would exhibit better adjustment over time. In addition, we expected that unmitigated agency would negatively impact the usefulness of perceiving adequate social support to psychological adjustment.

METHOD

Participants

As previously described (Hoyt, Thomas, Epstein, & Dirksen, 2009), participants were men being treated for cancer at an outpatient oncology clinic at a Veteran's Affairs Health Care System in a large metropolitan area in the southwestern United States. Patients were recruited as part of a larger study on "men's experiences with cancer." To be eligible, patients had to be over 18 years of age and able to read and understand English. To obtain a heterogeneous sample, participants were not excluded by primary cancer site, disease stage, or treatment type but were screened to exclude individuals with any cognitive debilitating comorbidity.

Participants included 55 men who ranged in age from 51 to 94 years ($M = 68.7$, $SD = 10.6$). Nearly 91% of participants were White (non-Hispanic), 7% were Hispanic/Latino, and 2% were Native American.

The majority (67%) was married or in a significant relationship. Sixteen percent did not complete high school, 56% reported completing high school or equivalent, and 28% earned a bachelor's or graduate degree. The median income range was \$20,000–\$30,000. Most (89%) participants were retired.

The majority of the sample was diagnosed with advanced cancer. Men had Stage I (3%), Stage II (21%), Stage III (31%), and Stage IV (45%) cancers. Prostate cancer was the most prevalent form of cancer in the sample (29%), followed by blood/bone cancers (24%), colorectal (18%), lung (11%), gastrointestinal (7%), bladder and kidney (4%), head and neck cancer (2%), and other (5%). Nearly 20% of the sample had received their initial diagnosis within the 6 months prior to study entry, 11% in the prior 7 months to 1 year; 38% were diagnosed 1 to 5 years prior, and 31% were diagnosed more than 5 years prior. The majority of men had received or were receiving adjuvant chemotherapy (56%) and radiation treatment (56%).

Procedure

Clinic personnel introduced qualified participants to research staff during regularly scheduled office visits. Research staff provided information about the study and invited patients to participate. Following informed consent, patients completed questionnaire assessments at study entry (T1) and a subset of measures again 6 months later (T2). In exchange for participating, participants were entered into a drawing to receive gift certificates to a reputable local retailer. The Institutional Review Board at the Phoenix Veterans Affairs Health Care System approved study procedures.

Measures

Unmitigated Agency

Unmitigated agency was measured at T1 using the Extended Personal Attributes Questionnaire (E-PAQ; Spence et al., 1979). The unmitigated agency scale consists of eight items rated on a 5-point bipolar adjective scale. Examples of item poles are *not at all greedy*–*very greedy* and *not at all competitive*–*very competitive*. Helgeson and Fritz (1999) documented the E-PAQ's adequate reliability and concurrent and discriminant validity. In this study, internal consistency for unmitigated agency was acceptable ($\alpha = .85$).

Social Support

Social support was measured with the MOS Social Support Survey (Sherbourne & Stewart, 1991). The MOS Social Support Survey is a 20-item scale

with five response categories (1 = *none of the time*; 5 = *all of the time*) for each item. It is a widely used instrument that measures several components of perceived availability of social support, including emotional/informational, tangible, affectionate, and positive social interaction. Individual component scores were highly correlated in this study ($r_s = .79$ to $.93$) and did not change differentially across time. Cronbach's alpha was $.98$ and $.88$ for the T1 and T2 assessments, respectively.

Psychological Adjustment

Three well-established indicators of psychological adjustment to cancer were administered.

(1) *Depressive symptoms.* Depressive symptoms were measured at T1 and T2 with the abbreviated Center for Epidemiologic Studies Depression Scale (CES-D; Andresen, Malmgren, Carter, & Patrick, 1994), a 10-item depression-screening questionnaire. The abbreviated CES-D has been validated against the full 20-item CES-D in a sample of more than 4,000 community-residing elderly adults (Andresen et al., 1994). Sample items include "I felt hopeful about the future" (reverse coded) and "I felt depressed," and responses reflect the experience of symptoms in the past week (0 = *rarely or none of the time*; 3 = *all of the time*). In the present study, Cronbach's alpha was $.71$ and $.80$ for the T1 and T2 assessments, respectively.

(2) *Cancer-specific intrusion.* Cancer-specific intrusive thoughts were measured with the Impact of Events Scale's Intrusion subscale (Horowitz, 1987) at T1 and T2. The Intrusion subscale has frequently been used to measure cancer-specific distress (e.g., Lewis et al., 2001).

As in previous research, the seven-item scale was slightly modified to be relevant to a cancer context (e.g., had thoughts about cancer when you didn't mean to; pictures or thoughts about cancer came into your mind when trying to fall asleep). Respondents indicated how frequently in the past week (1 = *not at all*; 5 = *often*) they experienced such thoughts. In the present study, Cronbach's alpha was $.89$ and $.90$ for the T1 and T2 assessments, respectively.

(3) *Cancer-related psychosocial symptoms.* Cancer-related psychosocial symptoms were assessed at T1 and T2 with the Psychosocial scale of the Cancer Rehabilitation Evaluation System-Short Form (CARES-SF; Schag, Ganz, & Heinrich, 1991). The CARES-SF is a shortened version of the CARES, a measure of cancer-specific health-related quality of life. The Psychosocial scale consists of 17 items that assess psychological symptoms, communication problems, and coping difficulties. Sample items

include “I worry about whether cancer is progressing” and “I have difficulty concentrating.” Respondents rate items on a 5-point scale ranging from 0 (*not at all*) to 4 (*very much*) during the past month. The CARES-SF possesses good psychometric properties, including high internal consistency and test-retest reliability as well as validation with other standardized measures (Schag et al., 1991). In the present study, Cronbach’s alpha was .88 and .90 for the T1 and T2 assessments, respectively.

Health Status and Demographics

Participants self-reported their age, level of education, income, employment status, family composition, and ethnicity. In addition, disease-specific information, including primary cancer type and cancer stage, secondary cancer site(s), time since diagnosis, and treatment history, as well as medical and psychiatric comorbidities, were obtained by medical record review.

Data Analyses

There were two steps in the data analyses. The first step involved finding the means and standard deviations of the key dependent variables and computing the zero-order correlations among the main study variables. Relationships with sociodemographic and disease-specific variables were also examined to identify possible covariates. The second step involved using multilevel modeling to analyze the hypothesized relationships between unmitigated agency, social support, and psychological adjustment to cancer. A multilevel modeling approach is useful for modeling the “causes and consequences of personality variables” (Fleeson, 2007, p. 530). With two levels of time and 55 participants, there were a total of 102 observations (8 missing). Preliminary analyses were conducted using SPSS (Version 15.0; SPSS, 2005), and HLM 6.07 statistical software program (Raudenbush, Bryk, Cheong, & Congdon, 2004) was used for the multilevel analyses. The three indicators of psychological adjustment (i.e., depressive symptoms, cancer-related intrusions, psychosocial symptoms) were the criterion variables to be predicted in separate models. To examine relationships over time, adjustment at Time 1 and assessment time (T1 = 0; T2 = 1) were entered as Level 1 units in the analyses. In accordance with analyses examining time-varying covariation (see Raudenbush & Bryk, 2002), social support was also entered as a predictor, resulting in the following Level 1 equation:

$$\text{Level 1: Adjustment}_{ti} = \pi_{0i} + \pi_{1i}(\text{Time}_{ti}) + \pi_{2i}(\text{Social Support}_{ti}) + e_{ti}$$

In essence, the Level 2 equations addressed questions regarding between-person differences to help reveal the degree to which changes in adjustment correspond with changes in social support, as well as

addressing the possibility that unmitigated agency moderates the degree to which changes in social support may be related to changes in adjustment. Equations at Level 2:

$$\begin{aligned}\text{Level 2: } \pi_{0i} &= \beta_{00} + \beta_{01}(\text{Adjustment at Time 1}) + \beta_{02}(\text{Unmitigated Agency}) + r_{0i} \\ \pi_{1i} &= \beta_{10} + \beta_{11}(\text{Unmitigated Agency}) \\ \pi_{2i} &= \beta_{20} + \beta_{21}(\text{Unmitigated Agency})\end{aligned}$$

RESULTS

Sociodemographic and Cancer-Related Predictors of Adjustment

Initial scores on adjustment indicators were examined for depressive symptoms ($M = 10.61$, $SD = 4.15$), cancer-related intrusions ($M = 1.51$, $SD = .61$), and psychosocial symptoms related to cancer ($M = 1.36$, $SD = .82$). Notably, the majority of the sample (59.3%) reported depressive symptoms above the clinical cut-off score (≥ 10) at study entry. Indicators of cancer-related distress, although low, were consistent with previous research on men with cancer (Roberts, Lepore, & Helgeson, 2006; Schag, Ganz, & Heinrich, 1991). Raw scores of adjustment slightly decreased from T1 to T2 for all three indicators (T2 depressive symptoms: $M = 9.31$, $SD = 5.21$; T2 cancer-related intrusions: $M = 1.46$, $SD = .60$; psychosocial symptoms: $M = 1.10$, $SD = .66$). Correlations among primary study variables are presented in Table 1. Simple correlations did not reveal significant relationships between unmitigated agency and social support or psychological adjustment indicators.

Relationships between sociodemographic (i.e., age, education, income, ethnicity, marital status) and disease-specific characteristics (i.e., cancer stage, time since diagnosis, treatment type) with the criterion variables (i.e., depressive symptoms, cancer-related intrusions, psychosocial symptoms related to cancer) were examined. Neither sociodemographic nor disease-specific variables were significantly related to indicators of Time 2 adjustment and so were not included in subsequent analyses.

Psychological Adjustment

Results from multilevel analyses are reported in Table 2. Among the three indicators of psychological adjustment, only psychosocial

Table 1
Correlations Among Time 1 and Time 2 Study Variables

Variable	1	2	3	4	5	6	7	8	9
1. Unmitigated agency	—	-.02	-.13	.07	.18	-.01	.07	-.13	-.02
2. Social support (T1)		—	.70***	-.25 [†]	-.03	.16	.11	-.24 [†]	-.11
3. Social support (T2)			—	.03	.07	.08	.12	.02	-.03
4. Depressive symptoms (T1)				—	.48***	.48***	.42**	.69***	.59***
5. Depressive symptoms (T2)					—	.14	.10	.34*	.59***
6. Cancer-related intrusion (T1)						—	.71***	.33**	.45**
7. Cancer-related intrusion (T2)							—	.43**	.50***
8. Psychosocial symptoms (T1)								—	.72***
9. Psychosocial symptoms (T2)									—

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2
Multilevel Analyses Predicting Psychological Adjustment

Variable	Depressive Symptoms			Cancer-Related Intrusion			Psychosocial Symptoms					
	β	SE	t	p	β	SE	t	p	β	SE	t	p
Intercept, π_{0i}	1.07	.37	2.90	.006	-.12	.48	-.26	.797	-1.01	.42	-2.42	.019
Intercept, β_{00}	.67	.05	13.61	<.000	.85	.06	15.30	<.000	.94	.06	15.05	<.000
T1 Adjustment, β_{01}	-.04	.17	-.21	.832	.20	.20	.97	.337	.36	.17	2.14	.037
UA, β_{02}												
Time, π_{1i}												
Intercept, β_{10}	.02	.19	.09	.926	-.25	.18	-135	.181	-.55	.25	2.23	.028
UA, β_{11}	-.05	.08	-.66	.510	.06	.08	.74	.462	-.14	.11	-1.25	.216
Social Support, π_{2i}												
Intercept, β_{20}	-.12	.05	-2.17	.032	-.52	.16	3.22	.002	.13	.09	.146	.149
UA, β_{21}	.04	.03	1.38	.169	-.21	.07	-2.91	.005	-.06	.04	-1.37	.173

Note. Only the intercept was included as a random effect. UA = unmitigated agency.

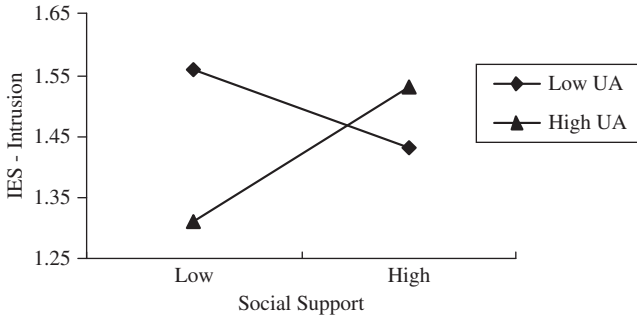


Figure 1

Cross-level interaction of social support \times unmitigated agency on cancer-related thought intrusion. *Note.* UA = unmitigated agency; IES = Impact of Events Scale.

symptoms significantly varied across time, exhibiting a downward linear time trend ($\beta = -.55$, $t = 2.23$, $p = .028$). The hypothesis that unmitigated agency would exert a main effect on adjustment, controlling for time and social support, was only partially supported. Although a significant positive simple effect of unmitigated agency was observed for cancer-related psychosocial symptoms ($\beta = .36$, $t = 2.14$, $p = .037$), unmitigated agency had no effect on the linear time trend across adjustment indicators.

The effect of social support on adjustment also differed across indicators. Social support exhibited a positive relationship with adjustment, as indicated by depressive symptoms ($\beta = -.12$, $t = -2.17$, $p = .032$) and cancer-related intrusions ($\beta = -.52$, $t = 3.22$, $p = .002$). No significant relationship was observed for cancer-related psychosocial symptoms. A central hypothesis in this study was that unmitigated agency would interact with perceptions of the social environment such that it would affect the impact of changes in social support on adjustment. To examine this possibility, the cross-level interaction terms (β_{21}) were observed. The cross-level interaction was significant in the case of cancer-related intrusion ($\beta = -.21$, $t = -2.91$, $p = .005$), implying that although a perceived increase in social support over time is a significant predictor of decreased cancer-related distress, its effect is weaker for men with greater levels of unmitigated agency (see Figure 1). It is notable, however, that this effect was not significant for depressive or cancer-related psychosocial symptoms.

DISCUSSION

Only partially supporting the original hypothesis, and previous findings (Helgeson & Lepore, 1997, 2004), a main effect of unmitigated agency on change in psychological adjustment was observed only for cancer-related psychosocial symptoms. Though only observed for one adjustment indicator, a lack of significance in simple correlations coupled with this finding highlights the impact of unmitigated agency on changing psychological processes related to adjustment. Results also reveal that social support predicted fewer depressive symptoms and less cancer-related thought intrusion. However, the significant cross-level interaction suggests that unmitigated agency weakens the utility of social support in reducing cancer-related intrusion. This effect was not observed, however, for depressive symptoms.

These findings provide some support that men with cancer respond differently to changes in perceived social support depending on their endorsement of unmitigated agency. However, this conclusion should be considered cautiously given that evidence was found for only one indicator of adjustment assessed in this investigation. More fully understanding the dynamics of these men's interactions within their interpersonal environments may help to guide future intervention efforts. Helgeson and Lepore (2004) reported that men have fewer social resources at higher levels of unmitigated agency. Existing support networks may be small and poorly organized prior to cancer and may therefore become easily taxed when demands for support are higher, leading to less favorable social exchanges. However, in this study neither initial perceptions of social support at study entry nor social support over time were correlated with unmitigated agency, suggesting that unmitigated agency may be more closely related to the impact, rather than availability, of social support.

At the same time, it is likely that for men who report high levels of unmitigated agency, the broad availability of social support is novel. Such individuals likely spend less time on communal activities or cultivating social relationships. In this case, increases in perceptions of social support might be compounded with the demands of cancer and cancer treatment, and represent an unwanted change or a shift away from one's typical set of behaviors and goals. Thus, men with higher levels of unmitigated agency might experience difficulty or

discomfort within their interpersonal environments or may be less proficient at negotiating supportive interactions. Increases in social support, particularly as they relate to having cancer, might be characterized by expectations to express difficult emotions, to be receptive to offered assistance, or to offer displays of warmth or gratitude. Such expectations represent a mismatch between person and environment for men high in unmitigated agency, perhaps resulting in increased distress.

It may be that unmitigated agency influences cognitive appraisals. It has been argued that men's masculine identity and sense of manhood is established and maintained through shared social exchanges and that one's sense of manhood requires social proof (Vandello, Bosson, Cohen, Burnaford, & Weaver, 2008). Gains in social support may be construed as a loss of control or perceived vulnerability. Men high in unmitigated agency may be more apt to rely on external cues to assess emotional or physical well-being. Thus, for men high in unmitigated agency, gains in social support availability may signal declining health or emotional weakness. Such perceptions could exacerbate negative mood, increase fear and uncertainty about the future, or negatively impact future social interactions (Leventhal et al., 1997).

It should also be noted that, at least in the case of cancer-related thought intrusions, men high in unmitigated agency who reported declines in perceived social support also reported lower levels of distress. Consideration should be given to the possibility that for some individuals, decreased perceived social support might be beneficial to their psychological adjustment to cancer. Although it is unlikely that isolation is adaptive for such patients, it is possible that decreases in certain types of social support (e.g., emotional support) during emotion-laden periods in the cancer trajectory allow for the protection of self-image and maintenance of more easily accepted forms of social support (e.g., instrumental support). Such a scenario might prevent increases in withdrawal or avoidance coping aimed at evading unwanted social interactions. Of course, more work is needed to understand the complex representations and appraisals of social support.

Lepore (2001; Lepore & Kernan, 2009) discussed the role of the social environment in facilitating cognitive processing in cancer patients, suggesting that social processing involves a process of reconciling cognitive representations of cancer with mental models of

one's self. Lepore argued that social interactions modulate cognitive processing and facilitate positive psychological adjustment when interpersonal communication is supportive, receptive, and unconstrained. For men high in unmitigated agency, increased social support might interfere with adaptive cognitive processing and lead to less constructive cognitive processes (e.g., depressive rumination, thought intrusion). Examination of the interplay of communication patterns and social skills for men high in unmitigated agency during times of mild or moderate stress might reveal skill deficits that may be future targets of intervention (e.g., accepting assistance from someone outside the immediate family). It is also possible that interpersonal relationships are generally more likely to be characterized by difficulty, criticism, or lower levels of warmth for men high in unmitigated agency. In this case, men who experience an increase in available support might also experience an increase in negative interactions.

It is noteworthy that men who were low on unmitigated agency appeared to benefit from gains in perceived social support and were negatively affected by losses in perceived social support. Social support may be a particularly important resource for men low in unmitigated agency, who might rely more heavily on social exchanges to cope with stressors and achieve personal goals. Although research on masculinity and health has focused on men who enact traditional gender norms, it is equally important to consider vulnerability that may be unique to men on the opposite end of this spectrum.

Several limitations should be noted when considering these results. Although this study used a relatively small sample, post hoc power analyses revealed that this study was adequately powered given the observed effect sizes. Participants were heterogeneous with respect to cancer type, time from diagnosis, and disease stage. Although the limited number of specific disease factors assessed in this study did not account for significant variance in adjustment, it is likely that specific cancer-related symptoms and treatment modalities affect adjustment in unique ways. A significant portion of the sample had advanced cancer, which might have a distinct influence on perceptions or actual availability of social support. Although this study used a longitudinal design and controlled for initial levels of adjustment at study entry, causal inferences cannot be made. Also, this study examined the role of changes in the perceived availability of social support, rather than the manner in which participants

mobilized their social support networks over time. Additional aspects of the social support construct require study. Finally, this study relied on self-report assessments of adjustment, social support, and unmitigated agency. It is also possible that increases in social support co-occur with declines in physical symptoms or other factors that might independently have a detrimental effect on adjustment to cancer. More research is needed to observe these relationships within distinct periods of the cancer experience (e.g., diagnosis, treatment).

The sample for this study was composed entirely of military veterans. Military training may attract distinct types of men or foster adherence to traditional male gender norms, particularly those involving notions of independence and self-reliance, which can shape men's emotional and interpersonal behaviors long after they have left military service (Brooks, 1990). For these reasons, veterans may serve as a valuable reference group in which to examine gender-related personality traits. At the same time, research with civilian men is needed to assess generalizability. Although this study included a representative sample of veterans for the surrounding geographic area in terms of race, class, and ethnicity, adequate examination of the impact of these factors on outcomes or their intersections with gender-related constructs requires a larger sample. Cultural influences on unmitigated agency and its impact on psychological adjustment are poorly understood.

This exploratory study adds to our existing understanding of the impact of unmitigated agency on adjustment to cancer in men, and suggests that gender-related personality traits, such as unmitigated agency, might alter the impact of psychosocial resources typically considered helpful to people coping with cancer. Changes in perceived social support availability during cancer may be particularly relevant to men's psychological adjustment. These findings should be considered preliminary, and before they can be translated to specific clinical intervention approaches, more work is needed to elucidate the unique interpersonal dynamics that characterize the impact of increased social support on psychological adjustment.

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