

The Contribution of Gender and Power to Perceptions of Physical Health, Mental Health, and Happiness: The National Social Life, Health, and Aging Project

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Abstract:

Objective: *Imbalances in societal power and associated gender norms can have adverse effects on health perceptions and resulting health behaviors. Aging further contributes to poor health outcomes and to barriers associated with the underutilization of diagnostic, treatment, and prevention services. Our analysis sought to use the Theory of Gender and Power (TGP) to identify social, economic, and societal factors that influence women's perceptions of their physical health, mental health, and happiness to support the development and/or modification of health interventions for this population.*

Methods: *The TGP guided the characterization of socio-economic and contextual factors that potentially contribute to perceptions of health and happiness. Using data from the National Social Life, Health and Aging Project Wave 2 female participants (N=1,839); items relevant to the TGP constructs of: 1) Gender-specific norms; 2) Power and authority; and 3) Cathexis were considered for inclusion. Linear regression analysis was conducted to identify the underlying factors that contribute to differences between the outcomes of interest.*

Results: *Our analysis identified items that significantly characterized perceptions of health and happiness mainly centered on interpersonal relationships.*

Conclusions: *Identified factors confirmed previous findings and provide insight into aging-related aspects among women 57-85.*

Keywords: *Aging, Women, Gender and Power, NSHAP.*

Introduction

Societal power norms and gender have been recognized as major social determinants of health. (Oncel, 2015; Sánchez-López, Saavedra, Dresch, & Limiñana-Gras, 2014) Gender and power imbalances, based on roles, behaviors, actions and characteristics, can adversely affect health perceptions and consequently health behaviors.(Fleming & Agnew-Brune, 2015; Oncel, 2015; Wingood & DiClemente, 2000) In fact, deviation from these societal norms of gender roles and power distribution can result in social isolation and adverse outcomes in physical, mental health, and perceptions of happiness for women.(Fleming & Agnew-Brune, 2015) Studies have shown gender impacts on a

variety of health related behaviors and associated outcomes. These include: 1) physical activity and dietary practices; 2) sexual behaviors; 3) substance abuse; 4) injury and violence; and 5) preventive health practices.(Fleming & Agnew-Brune, 2015; Oncel, 2015; Wingood & DiClemente, 2000) Gender and power norms are traditionally different for men and women.(Oncel, 2015; Sánchez-López et al., 2014; Wingood & DiClemente, 2000) Traditional norms can constrain a woman's power and limit her ability to have control over her health which in turn can directly contribute to her health behaviors and potentially adverse health outcomes.(Wingood & DiClemente, 2000) Age presents additional population-specific risk factors contributing to poor health outcomes due to aging and underutilization of

diagnostic.(Oncel, 2015) treatment, and prevention services.(Altschuler & Rhee, 2015; Sánchez-López et al., 2014) Furthermore, vulnerable populations of women face a multitude of adverse life experiences, including poverty, racism, and unemployment that contribute to adverse health outcomes.(Wingood & DiClemente, 2000),(Oncel, 2015) Intervention efforts to improve health, have recognized the contributions of interpersonal, social, and environmental factors.(Oncel, 2015),(DePadilla, Windle, Wingood, Cooper, & DiClemente, 2011; Fleming & Agnew-Brune, 2015; Jones et al., 2014) Yet, understanding these contributions in women 50 and older must be further explored.

Guided by the Theory of Gender and Power (TGP), (DePadilla et al., 2011; Wingood & DiClemente, 2000) the current study identified modifiable determinants of health in a population of middle-aged and elderly women ages 57 to 85 years of age. We specifically explored the role of gender and power on perceptions of health, mental health, and happiness. Using the TGP constructs, (Newsome & Airhihenbuwa, 2013; Wingood & DiClemente, 2000) we examined exposures and risk factors that contribute to health perceptions and ultimately health outcomes. Our results highlight the ways that gender and power dynamics can vary across perceptions. Exploring these relationships can assist in the design and/or modification of interventions aimed at improving health outcomes and overall population health of middle-aged and elderly women.

Conceptual framework: The TGP, a social structural theory, was selected because it provides a framework for understanding sexual inequality, gender, and power imbalances that place women at increased risk for adverse health outcomes.(Altschuler & Rhee, 2015; DePadilla et al., 2011; Wingood & DiClemente, 2000) TGP provides an important lens for developing and/or modifying interventions for women. The three major constructs characterize gender-based relationships. (Wingood & DiClemente, 2000) These are Gender Specific Norms (Labor), Power & Authority and Cathexis (social norms and affective attachments). (Wingood & DiClemente, 2000) Gender Specific Norms (Labor) refers to inequalities in the control of resources by women, including finance and employment-related factors. (Wingood & DiClemente, 2000) Power & Authority refers to inequalities in power and control that exist between men and women in societies that favor men. (Wingood & DiClemente, 2000) These include feelings of powerlessness in relationships or one's perceptions of their ability to thrive. (Altschuler & Rhee, 2015) Cathexis refers to cultural normative roles and social influences, including social support that may further weaken a woman's role and increase inequality. (Wingood & DiClemente, 2000)

Materials and Methods

Sample: The TGP constructs were operationalized, with data from the second wave of the National Social Life, Health and Aging Project (NSHAP). The NSHAP is a multistage, stratified area probability sample of US households that included men and women between the ages of 57 and 85 years.(Waite, Laumann, Das, & Schumm, 2009) The NSHAP was administered in two waves: Wave 1, 2005-2006 (W1) and Wave 2, 2010-2011 (W2) and designed to be longitudinal.(Waite et al., 2009) NSHAP items focused on exploring interpersonal connections and health outcomes associated with culture, gender and socioeconomic status; health behaviors; health care utilization; and healthcare involvement.(Waite et al., 2009) The current study analyzed Wave 2 data to explore the relationship between the TGP constructs for women (N=1839). The methodological design of NSHAP Wave that sought to understand the role of social support, personal relationships and aging; allowed the authors to explore important aspects of gender and power on health perceptions. (O'Muircheartaigh, 2014)

Measurement: Variables from NSHAP were selected based on the characteristics of the three TGP constructs(Wingood & DiClemente, 2000) and three outcome variables including self-reported Physical Health (Poor-Excellent), Mental Health (Poor-Excellent), and Happiness (Poor-Excellent).(O'Muircheartaigh, 2014; Waite et al., 2009) Power was defined by the variables of partner demands (Never-Often), partner criticism (Never-Often), marital status (Married, Unmarried) and perceptions of loneliness (Never-Often).(O'Muircheartaigh, 2014; Waite et al., 2009) Labor was defined by the variables of Insurance type (None, Medicare-Medicaid, Private), age (≤ 69 , 70-79, ≥ 80), and education (\leq High School, $>$ High School). (O'Muircheartaigh, 2014; Waite et al., 2009) Cathexis was defined by the variables of the number of family members (None ≥ 20), number of friends (None ≥ 20), and reliance on both family members (Never-Often) and friends (Never-Often). (O'Muircheartaigh, 2014; Waite et al., 2009)

Statistics: Three independent analyses were performed to determine the most important contributors to female participant's perception of physical health, mental health, and happiness. Descriptive statistics were conducted to characterize the sample of women. Participant characteristics were summarized with means and standard deviations for continuous variables, percentages, and frequencies for categorical variables. Race/ethnicity was also examined for its potential for confounding. Pearson Product Moment Correlations (PPMCs) were calculated to determine the relationship between outcomes and construct variables as described in Table 2. Chi square analyses were used to assess differences in categorical variables. Linear

regression analyses were performed to assess the relevant importance of significantly correlated variables with significant differences ($p < 0.05$) between the outcomes of interest: physical health, mental health, and happiness. Adjusted odds ratios (OR) and confidence intervals (CIs) were reported for regression analyses as described in Tables 2-4. Data analysis was conducted using SPSS 21.0.

Disclosure of Interest The authors have no conflicts to interest.

Results

Participants included 1,839 women ages 57–85, with 44% (N=812) under 69, 34.4% (N=633) ages 70-79 and 21.4% (N=394) 80 or older. Close to three-quarters of the sample

were non-Black, non-Hispanic (73.2%, N=1346), followed by Black/African American (16.3%, N=300) and non-Black Hispanics (10.5%, N=193). The majority of participants had more than a high school education (55.2%, N=1015). Over half of the sample (59%, N=1085) identified as being married followed by 41% (N=754) indicating not currently married. Almost all unmarried participants 93.1% (N=659) reported they were currently not in any romantic, intimate, or sexual partnerships. More than three-quarters of participants (79.1%, N=1227) reported that their main source of healthcare coverage was Medicaid, Medicare, or a combination of both, followed by Private Insurance (16.1%, N=250) with only 4% reporting no insurance coverage, Table 1. Correlation analyses indicated a variety of variables associated with self-rated physical health, mental health and happiness that comprised the constructs of the TGP, Table 2.

Table 1. Demographic Characteristics of Participants (N=1839)

	N	(%)
Age		
69 or Under	812	44.2
70-79	633	34.4
80 or older	394	21.4
Race		
non-Black, non-Hispanic	1346	73.2
Black or African American	300	16.3
non-Black Hispanics	193	10.5
Education		
more than High School	1015	55.2
High School or less	824	44.8
Insurance Coverage		
Medicaid-Medicare	1227	79.1
Private	250	16.1
None	362	4.8
Marital Status		
Married	1085	59.0
Not currently Married	754	41.0
Partnership if non-Married		
No	659	93.1

Univariate associations. Regression analysis was used to identify the significant predictors of self-reported physical health, mental health, and happiness.

Table 2. Correlations: Variables Associated with self-rated physical health, mental health and happiness

TGP Constructs	Variables	self-rated physical health	self-rated mental health	self-rated general happiness
POWER	Spouse/partner demands	-.029	-.098**	-.234**
	Spouse/partner criticize	-.097**	-.120**	-.249**
	Marital Status	-.081**	-.043	-.156**
	UCLA loneliness scale: lack companionship	-.155**	-.234**	-.391**
	Insurance Type	.123**	.065*	.074**

LABOR	Age Group	-0.101**	-0.042	-0.086**
	Education Level	.238**	.178**	.089**
	Rely on family/relatives	.086**	.096**	.126**
CATHEXIS	Number of family/relatives feel close to	.043	.087**	.151**
	Rely on friends	.159**	.160**	.170**
	Number of friends	.185**	.158**	.149**

Note. **p < 0.01, *p < 0.05

National Social Life, Health, and Aging Project Wave 2 (2010-11)

Significant predictors of self-reported better Physical Health were non-Blacks or Hispanics (β 1.4; 95% CI 1.10, 1.93), under the TGP construct of Power were not married (β 1.4; 95% CI 1.10, 1.93), and less loneliness (β 1.4; 95% CI 1.10,

1.93). For Labor: younger (β 1.4; 95% CI 1.10, 1.93), and more than high school education (β 1.4; 95% CI 1.10, 1.93). For Cathexis: more close relatives (β 1.4; 95% CI 1.10, 1.93) and friends (β 1.4; 95% CI 1.10, 1.93), Table 3.

Table 3. Multivariate Regression Analysis with Dependent Variable Physical Health

	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
	B	SE	Beta	t		Lower	Upper
(Constant)	1.382	.284		4.872		.825-	1.938
Race/Ethnicity	.217	.050	.137	4.362	**	.119	.314
POWER							
Spouse/partner demands	-.016	.033	-.015	-.486		-.080	.048
Marital Status	.243	.121	.061	2.005	*	.005	.481
UCLA loneliness scale: lack companionship	-.114	.034	-.106	-3.397	**	-.180	-.048
LABOR							
Age Group	-.126	.047	-.083	-2.689	**	-.218	-.034
Education Level	.406	.065	.191	6.232	**	.278	.534
Insurance type	.112	.064	.054	1.746		-.014	.238
CATHEXIS							
Rely on family/relatives	.113	.051	.069	2.225	*	.013	.213
Rely on friends	.070	.040	.059	1.763		-.008	.147
Number of friends	.061	.029	.070	2.140	*	.005	.118

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Significant predictors of self-reported better Mental Health were non-Blacks or Hispanics (β 1.4; 95% CI 1.10, 1.93), under the TGP construct of Power: less partner criticism (β 1.4; 95% CI 1.10, 1.93), and less loneliness (β 1.4; 95% CI 1.10, 1.93). For Labor: more than high school education (β

1.4; 95% CI 1.10, 1.93). For Cathexis: can rely on relatives (β 1.4; 95% CI 1.10, 1.93), and friends (β 1.4; 95% CI 1.10, 1.93), and have more close relatives (β 1.4; 95% CI 1.10, 1.93) and friends (β 1.4; 95% CI 1.10, 1.93), Table 4.

Table 4. Multivariate Regression Analysis with Dependent Variable Mental Health

	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
	B	SE	Beta	t		Lower	Upper
(Constant)	1.629	.223		7.298		1.191	2.067
Race/Ethnicity	.208	.049	.132	4.199	**	.111	.305
POWER							
Spouse/partner demands	.017	.036	.016	.468		-.053	.087
Spouse/partner criticize	-.102	.038	-.090	-2.659	**	-.177	-.027
UCLA loneliness scale: lack companionship	-.098	.034	-.091	-2.886	**	-.165	-.031
LABOR							
Education Level	.452	.065	.213	7.000	**	.326	.579
CATHEXIS							

Rely on family/relatives	.091	.053	.055	1.704	-.014	.196
Number of family/relatives feel close to	.015	.034	.014	.437	-.052	.081
Rely on friends	.077	.039	.065	1.946	-.001	.154
Number of friends	.049	.030	.057	1.653	-.009	.108

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Significant predictors of self-reported Happiness under the TGP construct of Power: less partner criticism (β 1.4; 95% CI 1.10, 1.93), and demands (β 1.4; 95% CI 1.10, 1.93), being married (β 1.4; 95% CI 1.10, 1.93), and less loneliness (β 1.4; 95% CI 1.10, 1.93). For Labor: younger age (β 1.4;

95% CI 1.10, 1.93) and more than high school education (β 1.4; 95% CI 1.10, 1.93). For Cathexis: can rely on friends (β 1.4; 95% CI 1.10, 1.93), and have more close relatives (β 1.4; 95% CI 1.10, 1.93), Table 5.

Table 5. Multivariate Regression Analysis with Dependent Variable Happiness

	Unstandardized Coefficients		Standardized Coefficients		95.0% Confidence Interval for B	
	SE	Beta	t	Lower Bound	Upper Bound	
(Constant)	3.749	.204				
POWER						
Spouse/partner demands	-.088	.028	-.100	-3.190	**	-.143
Spouse/partner criticize	-.119	.030	-.126	-3.996	**	-.177
Marital Status	-.233	.094	-.070	-2.482	*	-.418
UCLA loneliness scale: lack companionship	-.278	.026	-.310	-10.527	**	-.330
LABOR						
Age Group	-.064	.035	-.051	-1.814		-.134
Education Level	.102	.050	.058	2.023	*	.003
CATHEXIS						
Rely on family/relatives	.017	.041	.012	.404		-.065
Number of family/relatives feel close to	.105	.026	.123	4.028	**	.054
Rely on friends	.087	.031	.089	2.858	**	.027
Number of friends	.026	.023	.035	1.124		-.019

National Social Life, Health, and Aging Project Wave 2 (2010-11)

Discussion

The current study utilized the Theory of Gender and Power (TGP) to identify the contribution of gender and power dynamics to perceptions of Physical Health, Mental Health, and Happiness among middle-aged and elderly women in the US. Our results revealed a number of important findings about the measurement of the TGP constructs.(Wingood & DiClemente, 2000) Several strong and reliable factors emerged from the construct analysis. The important predictors of self-reported physical health, mental health and happiness across the constructs centered on levels of education and partnerships with family and friends and significant others.

Across the three perceived health outcomes for the TGP construct of Power, being less lonely was a significant indicator of better reported physical health, mental health, and happiness. Less partner criticism was also significantly associated with better reported mental health and happiness. Older women are more likely to experience widowhood,

loss of meaningful spousal roles and associations with friends, diminished economic resources, and interpersonal dependency.(Altschuler & Rhee, 2015; Fleming & Agnew-Brune, 2015; McFarland, Uecker, & Regnerus, 2011; Newsome & Airhihenbuwa, 2013) These factors may increase vulnerability and lead to declines in self-esteem and interpersonal power overall. (Swartz et al., 2011) Additionally, women may find their pool of available romantic partners diminished.(McFarland et al., 2011; Tuchman, Pennington, Kull, & Daneshyar, 2013) Difficulty in finding companionship could impact their feelings of social devaluation.(Waite et al., 2009),(Jacobs & Kane, 2009; McFarland et al., 2011; Swartz et al., 2011) Changes in physical health status with age are also associated with negative self-perceptions and feelings of powerlessness.(Brody et al., 2014; Swartz et al., 2011)

For the construct of Labor, having more than a high school education was a significant predictor of better reported physical health, mental health, and happiness. (Fleming & Agnew-Brune, 2015) Research has indicated higher levels

of education have a protective effect on health outcomes.(Swartz et al., 2011) It has been demonstrated based on this theoretical construct, that the ability to be financially independent allows for greater control of life events and overall health.(Oncel, 2015; Sánchez-López et al., 2014; Swartz et al., 2011) Younger age was also significantly associated with better reported physical health which is expected as age is independent of perceived mental health.(Sánchez-López et al., 2014) However, younger women also reported better happiness. Women 50 and older are defined as less perseverant, which directly impacts interpersonal power.(Brody et al., 2014),(Oncel, 2015; Sánchez-López et al., 2014) Perseverance as defined as the extent to which a person values, approves of or appreciates themselves - an indication of self-esteem that will directly impact perceptions of happiness.(Brody et al., 2014; Swartz et al., 2011)

Under the construct of Cathexis, having more close relatives was a significant indicator of better reported physical health, mental health, and happiness.(Coiera, 2013; Cornwell, Schumm, Laumann, & Graber, 2009) Having more close friends was also significantly associated with better reported mental health and happiness.(Gesell, Barkin, & Valente, 2013; Oncel, 2015; Swartz et al., 2011) Additionally, being able to rely on friends was significantly associated with better reported mental health and happiness. (Cornwell et al., 2009; Fleming & Agnew-Brune, 2015; Tuchman et al., 2013) In fact, normative beliefs and behaviors that directly contribute to health beliefs and behaviors, manifest through the emotional connections shared with others.(Altschuler & Rhee, 2015; Brody et al., 2014; Swartz et al., 2011)

Interestingly, the literature indicates that women with more social exposures (e.g., unsupportive family members, health system mistrust, conservative culture) and personal risk factors (e.g., low literacy, limited knowledge of disease prevention, negative attitudes and beliefs toward protective health behaviors) will in turn be burdened by societal structures of social norms and affective attachments compared to women who do not have such exposures or risk factors.(Brody et al., 2014; Cornwell et al., 2009; Jacobs & Kane, 2009) Our results align with the literature and indicate that better reported physical health, mental health, and happiness were a result of positive social exposures including being able to rely on and having many close relatives and friends.(Cornwell et al., 2009; Fleming & Agnew-Brune, 2015; Jacobs & Kane, 2009; Swartz et al., 2011; Tuchman et al., 2013) Additionally, regarding potential personal risk factors, our results indicate that higher levels of educational attainment was also associated with higher reported physical health, mental health, and happiness.(Cornwell et al., 2009; Litwin & Shiovitz-Ezra, 2011)

Limitations: Study limitations include the deficiency of multiple measures used to assess the TGP constructs.(O’Muircheartaigh, 2014; Waite et al., 2009) The NSHAP items were self-reported which may be impacted by social desirability bias and recall bias. Wave 2 data was selected for analysis; therefore without the analysis of Wave 1, changes in trends over time were not captured. Data analysis was based on available variables which potentially limit the analysis and is a common limitation of secondary data analysis. (O’Muircheartaigh, 2014; Waite et al., 2009) However, with the large sample size of the NSHAP,(O’Muircheartaigh, 2014; Waite et al., 2009) this was a minor limitation.

Conclusions

Our study provides insight into the TGP constructs that contribute to perceptions of Physical Health, Mental Health, and Happiness. Furthermore, the results of our study provide implications for developing and/or tailoring interventions. Designing interventions based on the TGP constructs provide psychological and behavioral targets to improve health outcomes and change behaviors to diminish adverse health effects.(DePadilla et al., 2011; Latham et al., 2010; Wingood & DiClemente, 2000; Wingood, Simpson-Robinson, Braxton, & Raiford, 2011) Specifically, perceptions of health across all constructs centered on relationships with others. Interventions targeted at relieving social isolation in aging populations of women including support groups, social activities, self-management and discussion groups can support aging and improved health outcomes. (Dickens, Richards, Greaves, & Campbell, 2011)

Theoretical construct analysis that lead to important mediators of behavior change can be viewed in the context of personal characteristics, such as age, and can assist in intervention development and refinement processes. Based on our findings, women 57 and over could benefit greatly from interpersonal skills training to improve educational limitations and occupational skills development to improve their self-efficacy to have greater control over their livelihood. For example, older women with inadequate education and health literacy will need specialized interventions to ensure the effective understanding of health education messages and comprehension of disease risk. Social capital, defined as characteristics of social structures that facilitate collective action has been proven to be a strong predictor of improved health outcomes. (Fleming & Agnew-Brune, 2015; Oncel, 2015; Sánchez-López et al., 2014) Interpersonal social networks including spouses, partners, close family, and friends can serve as a basis for risk assessment as well as a means for determining the efficacy of interventions. (Fleming & Agnew-Brune, 2015; Oncel, 2015; Sánchez-López et al., 2014) Our results imply

that the periodic assessments of older adults' social network types are warranted.

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