

A Linguistic Analysis of Psychosocial Factors in Sexual and Gender Minority Youth's Positive and Negative Daily Experiences: A Daily Diary Study



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INTRODUCTION

- Sexual and gender minority youth (SGMY) encounter daily experiences of minority stress, such as stigma and discrimination disproportionately compared to non-SGMY [1]. As youth, these individuals are in a sensitive developmental period.
- The daily diary methodology provides beneficial insight into the lived experience of vulnerable populations.
- Linguistic analyses quantitatively characterize qualitative data, allowing us to uncover psychosocial information from written responses [2].

STUDY OBJECTIVES

Using linguistic analysis to characterize the psychosocial patterns within SGMY negative and positive experiences.

SAMPLE & METHODS

- We recruited 31 SGMY aged 18-24 (Mage= 20.45) living in Tennessee with past year histories of suicidal ideation and current depressive symptoms.
- Over 28 days, participants completed 735 evening daily diaries on their smartphone asking them to describe a negative and positive event from their day as well as if the event was related to their SGMY identity.
- Among negative diaries, approximately 10.8% of responses were SGMY identity related. Among positive diaries, approximately 24.7% of responses were SGMY identity related.
- Linguistic Inquiry and Word Count (LIWC) = a computerized text analysis software. It was applied to the diaries and calculated the percentage of words in text that matched dictionary psychosocial categories, of which we investigated tone, emotion, stress, culture, and lifestyle.
- Among negative and positive daily diaries, independent samples *t*-tests were computed to characterize differences between SGMY and non-SGMY identity events in the psychosocial categories.

Dictionaries (examples from LIWC-22 Manual [3])

- Negative tone: bad, wrong, too much, hate.
 - Negative emotion: bad, hate, hurt, tired.
 - Social referents (subcategories = politics, ethnicity technology) : car, united states, govern*, phone.
 - Social referents (subcategories = family, friends, female/male references): you, we, he, she.
 - Stress: abuse*, attack*, fear.
 - Health (subcategories = illness, wellness, mental health): medic*, patients, physician*, health.
 - Positive tone: good, well, new, love.
 - Social (subcategories = social behavior (i.e. prosocial behavior, politeness, interpersonal conflict): you, we, he, she.
 - Lifestyle (subcategories = leisure, home, work, money, religion): work, home, school, working.
- * denotes wildcard such as abusive, abused, abusing, etc.

RESULTS

Table 1. Demographics (N=31)

Variable	n (%), [M, SD]	Variable	n (%), [M, SD]	Variable	n (%), [M, SD]
Age, years	20.5, 1.9	Sex assigned at birth		Gender identity (select all that apply)	
Race		Female	22 (71.0)	Gay/lesbian	20 (64.5)
Asian	2 (6.5)	Male	8 (25.5)	Bi/pan	6 (19.4)
Black/African American	4 (12.9)	Intersex	1 (3.2)	Trans girl/woman	1 (3.2)
Other	1 (3.2)	Sexual Orientation (select all that apply)		Trans boy/man	6 (19.4)
White	24 (77.4)	Straight/heterosexual	1 (3.2)	Nonbinary	9 (29.0)
Ethnicity		Lesbian	6 (19.4)	Genderfluid	2 (6.5)
Not Hispanic/Latino	28 (90.3)	Gay	4 (12.9)	Gender nonconforming	1 (3.2)
Hispanic/Latino	3 (9.7)	Bisexual	13 (41.9)	Genderqueer	1 (3.2)
Race/ethnicity		Pansexual	4 (12.9)	Agender	3 (9.7)
Person of Color	9 (29.0)	Queer	10 (32.3)	Other	1 (3.2)
Non-Hispanic/Latino, White	29 (71.0)	Questioning	2 (6.5)	Gender category	
		Asexual	5 (16.1)	Transgender or gender diverse	16 (51.6)
				Cisgender	15 (48.4)

Daily Diary Prompt and Sample Responses

Non-SGMY-related daily diary responses (blue) and SGMY-related responses (brown).

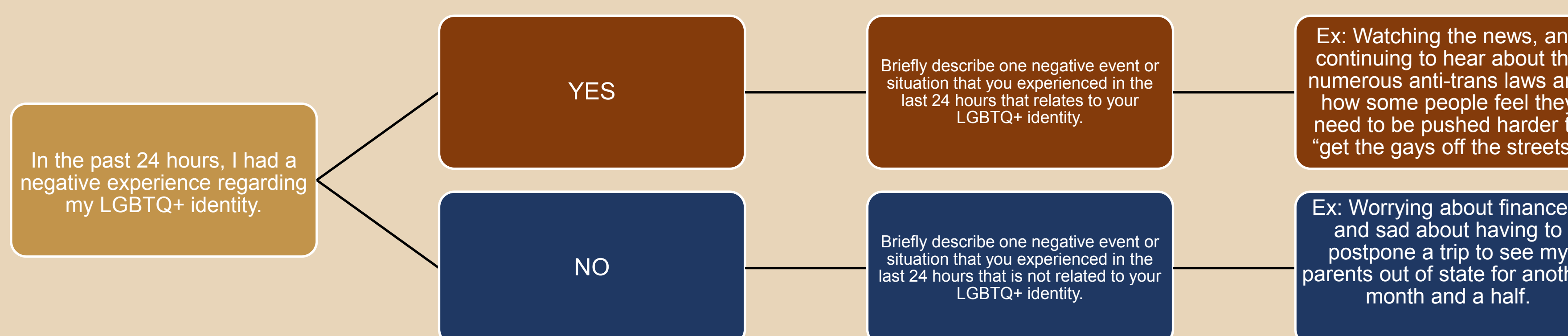


Figure 1: Participants' daily diary response prompts with example responses from negative experience. Diary responses also reported positive SGMY experiences (not shown). Example of positive SGMY experience: "I had a really great conversation with a friend about LGBT issues." Example of positive non-SGMY experience: "Was very productive and got a lot done today and don't feel like I overdid it."

Negative Experience

	SGMY (N=71)		Non-SGMY (N=586)		df	t	p	Cohen's d
	M	SD	M	SD				
Negative tone	4.64	5.27	8.16	9.24	655	3.15	< .01	0.47
Negative emotion	2.66	4.24	5.85	8.55	655	3.10	< .01	0.47
Culture	2.46	6.52	0.49	3.08	655	4.33	< .001	0.38
Social referents	8.05	7.34	4.14	6.76	655	4.56	< .001	0.55
Stress	1.84	3.32	4.61	6.92	655	3.32	< .001	0.51
Health	0.11	0.51	2.26	7.40	655	2.45	< .02	0.41

Among negative daily diaries, SGMY-related events had a higher proportion of words related to culture (politics, ethnicity, and technology) ($p < .001$) and social referents (family, friends, female/male referents) ($p < .001$).

Non-SGMY negative events had a higher proportion of words related to negative tone ($p < .01$), emotion (anxiety, anger, and sadness) ($p < .001$), stress ($p < .001$), and health ($p < .02$).

Positive Experience

	SGMY (N= 173)		Non-SGMY (N= 527)		df	t	p	Cohen's d
	M	SD	M	SD				
Positive tone	5.66	5.13	7.29	8.10	698	2.42	< .02	0.25
Social	15.04	9.55	8.93	9.63	698	7.26	< .001	0.64
Social referents	9.30	6.88	6.22	8.15	698	4.48	< .001	0.41
Lifestyle	3.73	5.51	8.52	10.05	698	5.98	< .001	0.59

Among positive daily diaries, SGMY-events had a higher proportion of words related to social ($p < .001$) and social referents ($p < .001$).

Non-SGMY positive events had a higher proportion of words related to positive tone ($p < .02$) and lifestyle (leisure, home, work, money, religion) ($p < .001$).

Word Clouds of Diary Responses



CONCLUSIONS

- Greater than 75% of positive and negative daily experiences are non-SGMY related. More positive SGMY daily experiences were reported than negative SGMY ones.
- SGMY events** were characterized by sociocultural dictionaries (culture, social processes, and social referents).
- In **SGMY negative events**, the culture dictionary (with subcategories of politics, ethnicity, and technology) is important to note especially within the highly stigmatized context of TN. This is reflected in responses scoring high such as "i saw hateful posts on social media about lgbt" (22.22% of words matched the culture dictionary).
- Non-SGMY negative events** are characterized with greater percentage of words with negative tone and emotion and non-SGMY positive events have an increased positive tone usage. It is interesting to note that affect words (words related to human feeling) are heavily expressed for non-identity related experiences.
- Non-SGMY negative events** are also characterized by stress and health. Although we hypothesized these dictionary categories would be significant for SGMY-related events (because of mental health stigma, hormone therapy, etc.), the results show the opposite.
- Non-SGMY positive events** are characterized by lifestyle linguistic categories. Thus, leisure, work, home, money, and religion categories are characterized by positive non-identity related events on average.
- Across all analyses, there were moderate difference between SGMY and non-SGMY experiences in linguistic patterns.
- The results reported on this presentation do not include all the significant and non-significant results analyzed for the study.

FUTURE DIRECTIONS

- Investigating *why* the significant categories are associated with SGMY and non-SGMY events (i.e. by analyzing 1st person pronoun usage).
- Looking at daily association between self-reported negative affect and linguistic analysis reported by LIWC.

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Author contributions:

NR: Designed the poster and generated data for all figures.

EW: Oversaw data analysis and design.

KC: Oversaw the project design and execution.