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“I want to get some bad-ass tattoos” and other reasons suicidal adolescents want to live: Results of a corpus-driven language analysis

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***Word count*:** 3,196

***Highlights*:**

- Adolescents experiencing suicidality can articulate their reasons for living.
- Reasons for living are varied, often related to “my” family, friends, and pets as well as their envisaged future aspirations and possessions.
- Practitioners can feasibly support adolescents to identify their reasons for living, and subsequently use these to inform therapeutic interventions.

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Abstract

Objective: Adolescent suicidality is a major public and mental health crisis. Youths contemplating suicide experience internal conflicts between wanting to die and live. The present study examined reasons suicidal adolescents want to live, using their own words, to develop a nuanced understanding of their individual perspectives and experiences.

Methods: Between January and December 2023, adolescent patients hospitalized for suicidality identified three reasons for living (RFL) as part of safety planning, in the context of standard clinical care. RFL were qualitatively analyzed using corpus-driven language analysis to determine the most frequently occurring words in the dataset and identify word-based patterns and contextual factors that outline what matters to adolescents.

Results: Participants included 211 adolescent patients; 97% identified three RFL. The corpus of 1,914 individual words comprised 494 unique word types. Analysis of the most common words (i.e., my, family, friends, want, future, mom, be, life, sister, go), along with the 10 most common nouns, adjectives, and verbs, offered insights into adolescents' sense of belonging and purpose, and reinforced the importance of relationships, hobbies, ambitions, and responsibilities for adolescents. Individual words, frequencies, structures, and indicative examples are provided.

Conclusions: RFL provide insight into what is important in the lives of suicidal adolescents. Thus, RFL may serve as a protective factor and help reduce suicidality. Additionally, RFL can feasibly be used therapeutically to build rapport, establish therapy goals, and personalize evidence-based treatments.

In the USA, suicide is the second most common cause of adolescent death (1). Results from the 2021 Youth Risk Behavior Survey revealed 30% of females and 14% of males seriously considered suicide, and 13% of females and 6% of males attempted suicide in the past year (2). Young females of color are at particular risk; Black females are more likely to attempt suicide, and Hispanic females are more likely to need medical treatment for an attempt compared to White females (2). Given its seriousness and impacts, adolescent suicide is a major public health crisis (3).

The Interpersonal Theory of Suicide (ITS) posits suicidal ideation is caused by the concurrent presence of thwarted belongingness (i.e., when a person's need to belong is unmet) and perceived burdensomeness (e.g., when a person believes they are a burden and an expendable member of their family), and suicidal behavior occurs in presence of suicidal desire and capability of suicide (4). ITS asserts the ability to *engage* in suicidal behaviors is distinct from the *desire* to engage in suicidal behaviors (e.g., a lowered fear of death and an elevated tolerance of physical pain help explain a person's overall capacity to engage in suicidal behavior) (4).

Risk factors (i.e., psychological factors, stressful life events, and personality traits) and protective factors (i.e., social connectedness and problem-solving skills) associated with adolescent suicide are well known (5-6). The Reasons for Living Inventory for Adolescents (7–9) is a 32-item self-report measure that quantifies adaptive beliefs and attitudes against suicide across five factors (e.g., self-acceptance; 10) and is useful in identifying risk factors of suicide (6–8). However, scores do not provide a nuanced understanding of an adolescent's experience. Gathering personalized RFL can help determine *what* is important to suicidal adolescents and *why* they want to live, information which can feasibly build-upon motivations for living.

In this study, we asked adolescents admitted to an inpatient psychiatric unit for suicidal thoughts and behaviors why they wanted to live to better understand their individualized reasons and identify potential treatment targets to reduce suicidal thoughts and behaviors. RFL were qualitatively analyzed using corpus-driven language analysis (11) to explore individual perspectives and experiences. To our knowledge, this is the first study to ask suicidal adolescents open-ended questions about their RFL. We believe knowing specific reasons adolescents want to live can improve mental health care.

Methods

Study design

This cross-sectional study utilized retrospective Electronic Medical Records (EMR) for data: RFL, demographics, suicidal risk, and referral details for Individual Therapy (IT). Data were collected and documented as part of routine clinical services between January and December 2023. This study qualified for *exempt human subjects research status* according to 45 CFR 46.101(b) Category #4 because data were extracted from medical records, analyzed in aggregate, and not identifiable by personal health information. Therefore, a “Waiver of Consent” and a “Waiver of Retrospective Chart Review” were granted by the Committee for the Protection of Human Subjects at [blinded for review].

Setting

This study was conducted on an acute adolescent unit in an inpatient, psychiatric hospital housing 24 patients. It is staffed by a child psychologist, child psychiatrists, psychiatric nurses, psychiatric technicians, social workers, psychiatry residents, and psychology graduate students. The hospital provides pharmacotherapy,

psychotherapy, and case management focused on symptom stabilization. The median length of hospitalization is 6 days (12).

Individual Therapy

As part of routine clinical care on the acute adolescent unit, psychiatrists placed individual therapy (IT) orders, which included demographic information, suicide risk, discharge date, and reason for therapy (e.g., “mood/anxiety management,” “self-harming behaviors and/or suicidality,” “depressive symptoms”). Patients learn therapeutic skills commonly utilized in evidence-based treatments (13-15), and receive 1-3 sessions, based on patient interest and availability of therapists.

Participants

Participants were a subset of patients (13-17 years) on the acute adolescent unit who were referred to IT specifically for “self-harming behaviors and/or suicidality,” and/or had a “moderate” or “high” suicide risk score (see measures). All participants completed a standardized safety plan (15) and their RFL during IT.

Therapists

Therapists included a licensed psychologist, four psychiatry residents, and seven Masters-level psychology students.

Training & Supervision

Therapists read a book chapter from *Treating Depressed and Suicidal Adolescents: A Clinician’s Guide* (15) on safety planning, which detailed strategies for negotiating and creating a safety plan. Next, the psychologist trained therapists in reading the RFL script (see study procedures) and recording adolescents’ responses verbatim. Afterwards, therapists observed the psychologist complete three safety

plans and RFL. Finally, the therapists conducted three safety plans and RFL while being observed by the psychologist to ensure fidelity. During training, the psychologist discussed procedures, answered questions, and provided feedback.

Measures

Demographics – age, race/ethnicity, gender, and insurance status were extracted from EMR.

Suicide Risk - The Columbia - Suicide Severity Rating Scale (C-SSRS) Screener - recent version was used during admission (16). Scores can be categorized as null (no suicidal ideation or behavior), low (suicidal ideation only), moderate (suicidal ideation with plan and past suicidal behavior), or high (suicidal ideation with plan, current intent, and past suicidal behavior) risk.

Study Procedures

After participants completed a safety plan (15), therapists read the following RFL script:

"Another way to stay safe is to change the way we think. Instead of focusing on all of the bad things going on in your life, you can try to focus on the good things and the things that are important to you. Let's write down anything that helps you feel better and would keep you from hurting yourself. So, what are your three biggest reasons for wanting to live?"

If participants had difficulty identifying their RFL, therapists read these prompts:

"What's something you are looking forward to this year? Like a new movie or video game coming out? Or going on a trip? What do you want to do when you are older,

after high school? What are your dreams and goals? What place would you like to visit one day? What is something that you really care about?"

Participants' wrote their RFL on their safety plan. Therapists recorded RFL verbatim, repeated them for accuracy and corrected as needed, and then added the exact responses to the EMR.

Data analysis

Data were explored using corpus-driven language analysis, a method with origins in the field of Applied Linguistics that is used to study language patterns within collections of texts (17). Corpus software can retrieve every instance of a particular word in a dataset and produce analyses based on co-occurring words. Analyses are then interpreted by a sociolinguist to identify repeated ways of talking about a specific topic and its potential importance (11). In recent years, corpus approaches have been increasingly used in studies related to mental health (18–21).

Responses in the current study were de-identified, assigned a unique study number, and converted to plain text files. Responses were uploaded into SketchEngine. Three types of analyses were conducted:

Frequency lists – lists of the most frequently occurring words were generated for the corpus as a whole.

Concordances – the most frequently occurring words were displayed in context in order to assess patterns in the surrounding text.

Collocations – statistical calculations of the words that most typically co-occurred when the node word (i.e., the words whose co-occurrence patterns are being studied) were searched for.

The results, when interpreted, provided a systematic overview of participants' RFL and enabled the identification of repeated and unique patterns across individual responses.

Results

The study consisted of an ethnically diverse sample of 211 participants who were mostly female (71%) with a mean age of 14.91 (SD=1.29) years (Table 1). IT typically occurred after the third day of admission (Mean=3.7; SD=2 days) and lasted, on average, 35 minutes. Regarding RFL, 97% (n=205) of participants reported three reasons.

Table 1. Demographics of 211 adolescent patients hospitalized for suicidality

Characteristic	N	%
Gender		
Female	149	71
Male	47	22
Transgender male	10	5
Non-binary/gender fluid	4	2
Transgender female	1	<1
Racial/ethnic group		
Latino/Hispanic	97	46
Black/African American	52	25
White/Caucasian	51	24
Multi-racial	7	3
Asian	4	2
Insurance status		
Public-assisted insurance	89	42
No insurance	69	33
Private/commercial insurance	53	25
The Columbia - Suicide Severity Rating Scale Screener		
High risk category	178	84
Moderate risk category	31	15
Low risk category	2	1
Reason for individual therapy referral/order		
Self-harming behaviors and/or suicidality	152	72
Mood/anxiety management	30	14
Other[1]	16	8
Depressive symptoms	13	6

[1] Anger management, trauma, grief/loss, anxiety, substance use, problem solving, preparation for discharge.

Corpus linguistics

The overall dataset consisted of a corpus of 1,914 tokens (i.e., number of individual words), comprising 494 word types (i.e., number of unique word forms). The Type-Token Ratio (TTR), specifically types/tokens X 100 (i.e., how rich or lexically varied the corpus is), was 26%, where the closer the TTR ratio is to 100%, the greater the lexical richness (broadly speaking how many different words are used within a text).

Figure 1 displays the most frequently occurring words. “My” (n=292) is the most frequently occurring word. “Family” (n=89) and “friends” (n=73) are also both cited frequently; however, the corpus highlights nuances. For instance, “mom” (n=36) is the individual family member mentioned most often, with “siblings” (n=16) also cited repeatedly, especially alongside the co-occurrence of “sister” (n=17) and “brother” (n=12). Other words to occur most frequently included “want” (n=49), “future” (n=45), “be” (n=31), “life” (n=19), “go” (n=17), “dogs” (n=16), “see” (n=15), “goals” (n=14), “have” (n=14), “little” (n=14), “do” (n=13), “myself” (n=12) and “live” (n=11).

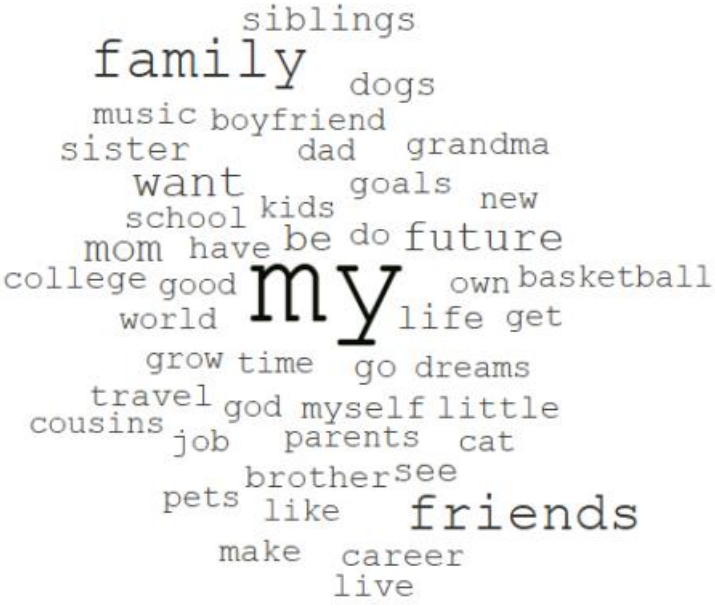

Figure 1 Most frequently occurring words

Table 2 lists the top 10 most frequently occurring nouns, alongside their structure and examples. Again, the relevance of “my” is apparent, the pronoun collocating most frequently with all top 10 nouns.

Table 2. Most frequently occurring nouns

Word	Frequency	Structure	Indicative examples
Family	89	[pronoun] + family	"*my family*"
Friends	73	[pronoun] + friends	"*my friends*"
Future	45	[pronoun] + future	"*my future*"
Mom	36	[pronoun] + mom	"*my mom*"
Life	19	[pronoun] + life; [adjective] + in + life	"*my life*"; "*successful in life*"
Sister	17	[pronoun] + [little] + sister	"*my* [little] *sister*"
Siblings	16	[pronoun] + siblings	"*my siblings*"
Goals	14	[pronoun] + goals; future + goals	"*my goals*"; "*future goals*"
Brother	12	[pronoun] + [little] + brother	"*my* [little] *brother*"
Dog	11	[pronoun] + dog	"*my dog*"

The top 10 most frequently occurring verbs (Table 3) reveals "want" most frequently occurs (n=49), with adolescents expressing a desire to have their own cars, houses and families or make their own decisions about where they "live" and with whom. Similarly, "go" (n=17) and "live" (n=11) are linked to "travel" or visiting/living in a place. The existential verbs "be" (n=31) and "get" (n=7) tend to indicate a future-oriented direction, most notably career aspirations, but also to express a desired emotional state. "See" (n=15) and "do" (n=13) also have similar functions, while "make" (n=9) typically referred to hobbies or emotions.

Table 3. Most frequently occurring verbs

Word (frequency) [Structure]	Indicative example/s
Want (n=49)	
[want + future goal]	"*I want to live on my own*"; "*I want to have kids*"; "*I want to dance on a big stage again*"
[want + car]	"*I want a car*"; "*I want my own car*"
[want + feeling]	"*I want to feel self-acceptance/love*"
Be (n=31)	
[be + career aspiration]	"*be a veterinarian*"; "*be a pro wrestler*"; "*be a freelance artist*"
[be + adjective of emotional state]	"*be happy*"; "*be grateful for being alive*"
[be + adjective of aspiration]	"*be rich*"
[be + with/around [person]]	"*to be with my brother*"; "*be around my family*"
Go (n=17)	
[go + [local attraction]]	"*go to a concert*"; "*go to church*"
[go + to [place within USA]]	"*go to Arizona*"; "*go to Chicago*"; "*go to New York*"
[go + to [a foreign country]]	"*go to El Salvador*"; "*go to Japan*"; "*go to Mexico*"
[go + [educational establishment]]	"*go to school*"; "*go to college*"
See (n=15)	
[see + [person]]	"*see my aunt again*"; "*see my grandmother one more time*"; "*see my friends*"
[see + future]	"*see what happens in the future*"; "*see my life in the future*"; "*see what the future has for me*"
Have (n=14)	
[have + family/children]	"*to have my own family*"; "*to have one kid*"; "*have family of my own*"
[have + [things to experience/see]]	"*I have a lot to make in terms of art*"; "*have so much stuff to live and see*"; "*a lot of stuff I haven't seen yet*"
Do (n=13)	
[do + future goal]	"*to do something with my life*"; "*do something fun for Halloween*"; "*pursue my job I want to do*"
[do + adjective of experience]	"*to do good in school for my mom*"
Live (n=11)	
[live + [a particular place]]	"*to live in New York*"; "*to live at the beach*"
[live + for [self or person]]	"*to live for myself and enjoy my life*"; "*to live for myself in general*"
[live + adverb of manner]	"*to live on my own*"; "*to live alone*"; "*to live by myself*"
Travel (n=10)	
[travel + the world]	"*to travel the world*"
[travel + [a particular place]]	"*to travel to the Bahamas*"
Make (n=9)	
[make + future goal]	"*make something with my life*"; "*make an impact on my two younger siblings*"
[(not)+make+[person]+ emotion]	"*not make my mom sad*"; "*not make my family sad*"
[make + hobby]	"*make music*"; "*make art*"
Get (n=7)	
[get + future goal]	"*to get somewhere in life*"; "*get a good job*; "*get married*"
[get + material object]	"*get some bad-ass tattoos*"; "*to get my car modified*"
[get + out]	"*to get out of my house*"

Table 4 indicates the top 10 most frequently occurring adjectives, which occur in substantially lower quantities than other content words. This is to be expected, given RFL correspond to specific nouns or verbs. “Little” is the most frequently occurring (n=14) and links in all cases to younger siblings (e.g. “little brother”). Echoing points identified in the verbs “want” and “have,” the adjective “own” (n=10) was linked with personal possession of one’s own material objects, pets, or even to live on their own. “New” (n=8) also served a similar function (e.g., “new videogames”), but was used more broadly to “experience new things”. Other adjectives like “good,” “happy,” and “best” relate to future goals (e.g., “get a good job”), desired states (e.g., “make my family happy”) or a person (e.g., “my best friend”). Despite “sad” carrying negative semantic prosody, it is also used in a similar way, with adolescents stating, “not make my family sad.” Although less frequently used, “next,” “older,” and “big” are frequently used to imagine a better future (e.g., “next year I’ll be…”), fulfill a perceived duty of care (e.g., “take care of parents as they grow older”), or express more abstract desires (e.g., “big dreams”).

Table 4. Most frequently occurring adjectives

Word (frequency) **[Structure]**	**Indicative example/s**
Little (n=14)	
[my + little + [sibling]]	"*my little sister*"; "*my little brother*"
Own (n=10)	
[my + own + material object]	"*to customize my own car*"
[my + own + [family/pets]]	"*to start my own family*"
[on my + own]	"*to be on my own*"
New (n=8)	
[new + material object]	"*read new books*"; "*new videogames*"
[[verb] + new things]	"*experience new things*"
Good (n=5)	
[[verb] + good + future goal]	"*to get a good job*"; "*to go to a good college*"
[good + material object]	"*good ass food*"
Happy (n=4)	
[be + happy[	"*be happy*"
[make + [person/people] + happy]	"*make my family happy*"
Best (n=4)	
[best + [person]]	"*my best friend*"
Sad (n=3)	
[(not) + make + [person/people] +sad]	"*not make my mom sad*"; "*not make my family sad*"
Next (n=2)	
[next + [time]]	"*next year*"
Older (n=2)	
[grow + older]	"*grow older*"
[older + [sibling]]	"*my older brother*"
Big (n=2)	
[big + abstract goal]	"*big stage*"; "*big dreams*"

Supplemental Table 1 provides the top ten RFL across the first, second, and third reasons. People were repeatedly listed as an RFL, whether "family," "friends," "siblings," or as a wider grouping or as specific individuals, such as a "mom," "brother," or "sister."

Supplemental Table 1. Most frequently occurring words across three reasons for living

First reason Word	Frequency	Second reason Word	Frequency	Third reason Word	Frequency
Family	49	Friends	20	[see] Future	25
Mom	19	Family	18	Family	13
Friends	19	[see] Future	10	Friends	13
Brother	8	Mom	8	[achieve] Goals	9
[see] Future	8	[experience] Life	7	Career	8
Sister	8	School	5	Be [job]	7
Siblings	8	Go [place]	5	Mom	7
[better] Life	5	[achieve] Goals	4	Travel	6
Myself	5	Music	4	Go [place]	5
Have [kids]	5	Be [job]	4	Myself	5

Although many adolescents identified similar RFL, there is a wide variety of uncommon responses, such as “my truck,” “my plants,” and “I want to get some bad-ass tattoos.” To better understand the originality of RFL, we investigated infrequently occurring responses. Participants listed specific people (e.g., “Pops”), pets (e.g., “Peanut”), and destinations (e.g., “Turkey”). Additional RFL included idiosyncratic personal goals (e.g. “I want to read 100 books this year”) and achievements (e.g., “Next year I'll be the soccer team captain”), and one adolescent simply wrote “YOLO” (“you only live once”). Several patients listed deterrents to suicide as RFL, including not wanting to cause harm to others (e.g., “I saw how my dad cried and I don’t want him to cry like that anymore”) or themselves (e.g., “It would hurt to kill myself”). Six participants mentioned religious reasons, citing “God,” “church,” and “knowing I’ll go to hell if I kill myself.” In total, 178 words were only mentioned once: 137 nouns, 20 verbs, 16 adjectives and 5 adverbs (Supplemental Table 2).

Supplemental Table 2. Words mentioned once (N=178)

Nouns (n=137)
Names: 34 unique names were listed as RFL. We have not listed names to ensure confidentiality.
Groups/people: "*classmates*"; "*godmother*"; "*godparents*"; "*grandparents*"; "*homeboys*"; "*others*"; "*Pops*".
Careers: "*actress*"; "*freelance*"; "*maker*"; "*model*"; "*mortician*"; "*psychologist*"; "*singer*"; "*veterinarian*"; "*wrestler*".
Places*:* "*Arizona*"; "*Bahamas*"; "*beach*"; "*California*"; "*Chicago*"; "*Crema*"; "*downtown*"; "*Italy*"; "*Japan*"; "*Mexico*"; "*Taipei*"; "*Turkey*".
Hobbies*:* "*animals*"; "*anime*"; "*band*"; "*basketball*"; "*captain*"; "*cartoons*"; "*cello*"; "*climbing*"; "(my) *collection*"; "(going to a) *concert*"; "*drawing*"; "*fiction*"; "*fish*"; "*games*"; "*hair*"; "*make-up*"; "*movie*"; "*parachute*"; "*photography*"; "*plants*"; "*reading*"; "*rollerskating*"; "*shopping*"; "*skating*"; "*soccer*"; "*sports*"; "*technology*"; "*theme park*"; "*truck*"; "*TV shows*"; "*video*"; "*videogames*"; "*YouTube series*".
Aspirations or goals: "*adulthood*"; "*babies*"; "*business*"; "*charity*"; "*children*"; "*choices*"; "*comfort*"; "*curiosity*"; "*education*"; "*experiences*"; "*fun*"; "*hope*"; "*impact*"; "*joy*"; "*peace*"; "*plan*"; "*possibility*"; "*projects*"; "*promises*"; "*quince* (quinceañera)"; "*relationship*"; "*scholarship*"; "*self-acceptance*"; "*stage*"; "*surprises*"; "*tattoos*"; "*terms*"; "*transition*"; "*updates*"; "*wedding*"; "*wonder*".
Miscellaneous*:* "*debt*"; "*hell*"; "*juice*"; "*loss*"; "*meeting*"; "*self*"; "*set*"; "*Spite*"; "*team*"; "*voice*"; "*YOLO* (i.e., You Only Live Once)".
Verbs (n=20)
"*accomplish*"; "*advance*"; "*choose*"; "*customize*"; "*dance*"; "*die*"; "*drive*"; "*grieve*"; "*group up*"; "*hang*"; "*learn*"; "*pursue*"; "*raise*"; "*receive*"; "*show*"; "*start*"; "*stay*"; "*use*"; "*visit*"; "*write*".
Adjectives (n=16)
"*18th*"; "*afraid*"; "*better*"; "*confident*"; "*famous*"; "*high*"; "*manual*"; "*married*"; "*modified*"; "*old*"; "*pretty*"; "*proud*"; "*ready*"; "*rich*"; "*successful*"; "*young*".
Adverbs (n=5)
"*always*"; "*eventually*"; "*properly*"; "*someday*"; "*somewhere*".

Discussion

Overwhelmingly, adolescents hospitalized for suicide risk identified three RFL. Identifying RFL may seem at odds with their recent suicidal thoughts and behaviors but is consistent with prior findings suggesting the majority of individuals contemplating suicide do not attempt suicide, and even fewer will die by suicide (22). Of those who attempted suicide, many people regret their attempt (23) and often retrospectively feel a greater sense of purpose and gratitude for life (24, 25). Additionally, timing is

important; RFL were typically gathered 4 days after hospitalization, which allowed the patient time to contemplate their thoughts and behaviors in a contained environment Adolescents engaged in the unit's program (e.g., recreational therapy, coping skills groups, IT, medication management) designed to reduce psychological distress. Additionally, patients meet peers experiencing similar problems and interact with staff, thereby potentially fostering social support. Lastly, patients typically receive increased attention from their family, who typically express their affection for the patient, and reinforce their personal qualities and value. This likely contributes to an increased sense of belonging and self-worth. Thus, RFL gathered during hospitalization may reflect more optimism than if collected before an attempt or hospitalization.

The importance of social connections for wellbeing is well established (26–29), and this human connectedness decreases the risk of suicidal behavior (30). However, this study has elucidated the particular importance of key people, which can reveal insights about adolescents' motivations for living. In the case of younger siblings, it indicates many patients felt a certain sense of responsibility or duty of care (e.g. "I want to protect my brother").

Further RFL nuance has also been obtained regarding adolescents' interests, ambitions, and desires, such as their inquisitiveness to "see" (read - live) into the future. Adolescents express both relatively small-scale (e.g. "go to a concert") and large-scale (e.g. "go to Japan") future-oriented goals and desires to live in a particular place, but more commonly, to live *on their own* (i.e., "live on my own at the beach") or *for themselves* (e.g., "to live for myself and enjoy my life"). They wish to "get out" of their house, "get a good job," "get married" or simply "get somewhere in life," but RFL also frequently refer to doing "good in school" or doing "something with my life," as well as individual activities (e.g., "doing my make-up"). While some adolescents signal

a desire to pursue more conventional career paths (e.g., “a welder”), others hope to become a professional “singer,” “actor,” “pro wrestler,” or shared “I want to be famous.” Adolescents also use “be” to express a desired emotional state (i.e., “to be happy”) or in relation to a person (e.g., “to be with my mom”). At times adolescents may not have something concrete in mind, yet the ‘unknown’ and the possibility it offers is enough to give them a RFL. Adolescents express an unexpected optimism in the notion of just “see[ing] what the future has in store.” This has important implications in relation to RFL being used to instill hope (31), where clinicians can potentially harness these curiosities.

The fact “my” was the most frequently used word is noteworthy. Dam (32) has remarked personal pronouns, such as “my,” contribute to the construction of communities and attached identities, helping people to develop a sense of belonging and purpose. “My” may provide evidence these adolescents see themselves as part of a distinct socially cohesive group, or alternatively they may aspire to belong to a distinct social grouping. “My” therefore, does not just simply declare belonging to a certain group, but also belonging to the system of experiences, rights, and privileges being part of that group represents (33).

Ownership, possessions, and desires (e.g., to “own”) were also valuable constructs. Rose (34) notes the importance of ownership as a culturally and historically specific system of communication through which people act and negotiate social relations. Ownership also feasibly gives a person power and control over their own lives, fostering a sense of identity and rootedness in the world. Likewise, repeated use of the pronoun “myself” suggests some adolescents’ motivation to live is possibly rooted in their own sense of self and their desire to prioritize themselves. Therapeutically, addressing adolescents’ desire for ownership could be integrated into

interventions by encouraging them to identify and articulate what they wish to ‘own’—be it tangible items, personal goals, or aspects of their identity. This process can help them recognize their values and priorities, thus fostering a sense of agency that aligns with their intrinsic motivations.

The results of this study contribute to the theoretical understanding of suicidal behavior. The ITS highlights thwarted belongingness and perceived burdensomeness contribute to suicidal ideation; thus, the opposite may also be true - belongingness and perceived usefulness may decrease suicidal thoughts (4). RFL express unique protective factors, in the face of risk factors, and suggest ways youths feel they belong and have a purpose. Overwhelmingly, participants listed people and pets as important, suggesting they feel connected to something and belong to a group. Regarding perceived usefulness, adolescents listed ways they could help or be useful to their families (e.g., “To take care of my parents as they grow older”) and contribute to society (e.g., “I want to help people who don't have a voice”). Many participants also shared they wanted to do something purposeful with their lives, which may suggest adolescents believe their future actions could bring meaning or purpose to their life or the lives of others, even if they do not know what that purpose is yet.

In clinical contexts practitioners appear confident establishing RFL (35) and, once identified, they can use this meaningful client-identified information to enhance rapport and therapeutic alliance, establish treatment goals, and personalize coping skills and strategies (36). For instance, spending more time with supportive people (e.g., “my homeboys”) could bolster social support (37) and participating in valued hobbies (e.g., “basketball”) can facilitate behavioral activation (38). Similarly, adolescents who identified a career (e.g., “veterinarian”) could be supported to work

towards their goal (39-40). Lastly, RFL can be used to challenge unhelpful thinking patterns (41).

This study is the first to employ corpus-driven language analysis to explore suicidal adolescents' RFL. The novel method allowed for an exploration of qualitative data where other methods (e.g., thematic analysis) would not have been viable, given the relatively small (yet rich and meaningful) dataset. Prior related retrospective studies have encountered recall bias issues (42). Therefore, a strength was collecting RFL from adolescents when they were currently hospitalized due to suicide risk. The ethnically diverse sample is also a strength, as minoritized groups are typically underrepresented in mental health research (43–45). Equally, collecting data over a full calendar year is significant, given the cyclical nature of emergency department visits and hospitalizations for suicidal adolescents (46). Limitations included a sample drawn from one large hospital in Texas. Differences in RFL by gender, race/ethnicity, and sexuality/gender identity will be explored in future papers.

Conclusions

Adolescent suicide is a major public health crisis. Youths contemplating suicide are experiencing internal conflict between wanting to die versus wanting to live (47). Identifying individualized RFL can provide unique insights into *who* and *what* is most important to adolescents. RFL can feasibly be used to build rapport, establish therapy goals, and personalize evidence-based treatments, thereby reducing suicidal thoughts and behaviors.

References

1. World Health Organization: Global health estimates: Leading causes of death: Cause-specific mortality, 2000–2019, 2024.Available from: https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death
2. Gaylor EM, Krause KH, Welder LE, et al.: Suicidal Thoughts and Behaviors Among High School Students — Youth Risk Behavior Survey, United States, 2021. MMWR Suppl 72: 45–54, 2023.
3. Horowitz L, Tipton M V., Pao M: Primary and Secondary Prevention of Youth Suicide. Pediatrics 145: S195–S203, 2020.
4. Van Orden KA, Witte TK, Cukrowicz KC, et al.: The interpersonal theory of suicide. Psychol Rev 117: 575–600, 2010.
5. Carballo JJ, Llorente C, Kehrmann L, et al.: Psychosocial risk factors for suicidality in children and adolescents. Eur Child Adolesc Psychiatry 29: 759–776, 2020.
6. Wasserman D, Carli V, Iosue M, et al.: Suicide prevention in childhood and adolescence: a narrative review of current knowledge on risk and protective factors and effectiveness of interventions. Asia-Pacific Psychiatry 13, 2021.
7. Osman A, Downs WR, Kopper BA, et al.: The reasons for living inventory for adolescents (RFL-A): Development and psychometric properties. J Clin Psychol 54: 1063–1078, 1998.
8. Gutierrez PM, Osman A, Kopper BA, et al.: Why Young People Do Not Kill Themselves: The Reasons for Living Inventory for Adolescents. J Clin Child Psychol 29: 177–187, 2000.
9. Gorraiz G, Porta G, McMakin DL, et al.: Factors Associated With Reasons for Living Among Suicidal Adolescents. Archives of Suicide Research 1–11, 2023.
10. Stark L, Seff I, Yu G, et al.: Correlates of Suicide Ideation and Resilience Among Native- and Foreign-Born Adolescents in the United States. Journal of Adolescent Health 70: 91–98, 2022.
11. Baker P: Sociolinguistics and Corpus Linguistics. Edinburgh, Edinburgh University Press, 2020
12. Ugueto AM, Lucassen MFG: Differences in suicidality and psychological symptoms between sexual and gender minority youth compared to heterosexual and cisgender youth in a psychiatric hospital. Child Youth Serv Rev 138: 106504, 2022.
13. Chorpita BF, Weisz JR: MATCH-ADTC: Modular Approach to Therapy for Children with Anxiety, Depression, Trauma, or Conduct Problems. PracticeWise, 2009
14. Rathus JH, Miller AL: DBT Skills Manual for Adolescents. Guilford Press, 2014

15. Brent DavidA, Poling KD, Goldstein TR: Treating depressed and suicidal adolescents: A clinician's guide. New York, Guilford Press., 2011

16. Posner K, Brown GK, Stanley B, et al.: The Columbia–Suicide Severity Rating Scale: Initial Validity and Internal Consistency Findings From Three Multisite Studies With Adolescents and Adults. American Journal of Psychiatry 168: 1266–1277, 2011.

17. Barth D, Schnell S: Understanding Corpus Linguistics. London, Routledge, 2021

18. Hunt D, Brookes G: Advertising Health Communication: Discourse Approaches. New York, Springer, 2021

19. Hunt D, Harvey K: Health Communication and Corpus Linguistics: Using Corpus Tools to Analyse Eating Disorder Discourse Online; in Corpora and Discourse Studies. London, Palgrave Macmillan UK, 2015.

20. Atanasova D, Koteyko N, Brown B, et al.: Representations of mental health and arts participation in the national and local British press, 2007–2015. Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine 23: 3–20, 2019.

21. Price H: Corpus Linguistics and the Construction of Mental Illness in the Press. Cambridge, Cambridge University Press., 2022

22. World Health Organization: Primary Prevention of Mental, Neurological and Psychosocial Disorders. World Health Organization, , 1998

23. Henriques G, Wenzel A, Brown GK, et al.: Suicide Attempters' Reaction to Survival as a Risk Factor for Eventual Suicide. American Journal of Psychiatry 162: 2180–2182, 2005.

24. Worsley D, Barrios E, Shuter M, et al.: Adolescents' Experiences During "Boarding" Hospitalization While Awaiting Inpatient Psychiatric Treatment Following Suicidal Ideation or Suicide Attempt. Hosp Pediatr 9: 827–833, 2019.

25. Keefner TP, Stenvig T: Searching for a Sense of Place: The Process of How Adolescent Girls Overcome Suicidality. Issues Ment Health Nurs 41: 855–872, 2020.

26. Blum RW, Lai J, Martinez M, et al.: Adolescent connectedness: cornerstone for health and wellbeing. BMJ e069213, 2022.

27. Cheng Y, Li X, Lou C, et al.: The Association Between Social Support and Mental Health Among Vulnerable Adolescents in Five Cities: Findings From the Study of the Well-Being of Adolescents in Vulnerable Environments. Journal of Adolescent Health 55: S31–S38, 2014.

28. McConnell EA, Birkett M, Mustanski B: Families Matter: Social Support and Mental Health Trajectories Among Lesbian, Gay, Bisexual, and Transgender Youth. Journal of Adolescent Health 59: 674–680, 2016.

29. Parker K, Hallingberg B, Eriksson C, et al.: Typologies of Joint Family Activities and Associations With Mental Health and Wellbeing Among Adolescents From Four Countries. Journal of Adolescent Health 71: 55–62, 2022.

30. Kuramoto-Crawford SJ, Ali MM, Wilcox HC: Parent–Child Connectedness and Long-Term Risk for Suicidal Ideation in a Nationally Representative Sample of US Adolescents. Crisis 38: 309–318, 2017.

31. Asarnow JR, Baraff LJ, Berk M, et al.: An Emergency Department Intervention for Linking Pediatric Suicidal Patients to Follow-Up Mental Health Treatment. Psychiatric Services 62: 1303–1309, 2011.

32. Dam L: The functionality of personal pronouns in constructions of communities. Globe: A Journal of Language, Culture and Communication 1: 31–42, 2015.

33. Bourdieu P: The Logic of Practice. Stanford, Stanford University Press., 1990

34. Rose CM: Property and Persuasion: Essays on the History, Theory, and Rhetoric of Ownership . Boulder, Westview Press, 1994

35. Bettis AH, Donise KR, MacPherson HA, et al.: Safety Planning Intervention for Adolescents: Provider Attitudes and Response to Training in the Emergency Services Setting. Psychiatric Services 71: 1136–1142, 2020.

36. Weisz JR, Chorpita BF, Frye A, et al.: Youth top problems: Using idiographic, consumer-guided assessment to identify treatment needs and to track change during psychotherapy. J Consult Clin Psychol 79: 369–380, 2011.

37. Miller AB, Esposito-Smythers C, Leichtweis RN: Role of Social Support in Adolescent Suicidal Ideation and Suicide Attempts. Journal of Adolescent Health 56: 286–292, 2015.

38. McCauley E, Gudmundsen G, Schloredt K, et al.: The Adolescent Behavioral Activation Program: Adapting Behavioral Activation as a Treatment for Depression in Adolescence. Journal of Clinical Child & Adolescent Psychology 45: 291–304, 2016.

39. Babiss LA, Gangwisch JE: Sports Participation as a Protective Factor Against Depression and Suicidal Ideation in Adolescents as Mediated by Self-Esteem and Social Support. Journal of Developmental & Behavioral Pediatrics 30: 376–384, 2009.

40. Fredricks JA, Eccles JS: Extracurricular Involvement and Adolescent Adjustment: Impact of Duration, Number of Activities, and Breadth of Participation. Appl Dev Sci 10: 132–146, 2006.

41. Donovan CL: Cognitive Restructuring; in Handbook of Child and Adolescent Psychology Treatment Modules. Edited by Farrell LJ, Murrihy R, Essau CA. Cambridge, Massachusetts, Academic Press, 2023.

42. Castellví P, Lucas-Romero E, Miranda-Mendizábal A, et al.: Longitudinal association between self-injurious thoughts and behaviors and suicidal

behavior in adolescents and young adults: A systematic review with meta-analysis. J Affect Disord 215: 37–48, 2017.

43. Syed M, Santos C, Yoo HC, et al.: Invisibility of racial/ethnic minorities in developmental science: Implications for research and institutional practices. American Psychologist 73: 812–826, 2018.

44. Cummings JR, Druss BG: Racial/Ethnic Differences in Mental Health Service Use Among Adolescents With Major Depression. J Am Acad Child Adolesc Psychiatry 50: 160–170, 2011.

45. Alegría M, Green JG, McLaughlin KA, et al.: Disparities in child and adolescent mental health and mental health services in the US. New York, William T. Grant Foundation, 26, 2015

46. Kim Y, Krause TM, Lane SD: Trends and Seasonality of Emergency Department Visits and Hospitalizations for Suicidality Among Children and Adolescents in the US from 2016 to 2021. JAMA Netw Open 6: e2324183, 2023.

47. Brown GK, Steer RA, Henriques GR, et al.: The Internal Struggle Between the Wish to Die and the Wish to Live: A Risk Factor for Suicide. American Journal of Psychiatry 162: 1977–1979, 2005.