What's Love got to do with it? A language-Based Analysis of Emotions in Gender Diverse Bisexual Adolescents' Experiences with their Sexual Orientation and Intimate Relationships

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Summary

Bi+ adolescents are a group of people who are prone to a variety of positive and negative experiences. Combine being bi+ with either also being trans* or being in a relationship and these effects could change for better or worse. Whatever the effects are they could be of great influence on the emotions that people experience. These emotions are researched in this study with a set of secondary data consisting of N=1931 bi+ adolescents, with ages ranging from 16 till 25 years old. Analysis is done using the LIWC (Language Inquiry and Word Count) software to quantify textual data in order to make it useful for regression analysis. Answers were sought for whether there are differences in emotion usage between positive and negative emotions on a question that asked for positive experiences, whether different gender identities use different emotion words, and whether there is a difference between being in a relationship or not. Results showed that 1. Bi+ adolescents used more positive emotion words compared to negative emotion words, which was to be expected with the question. 2. There were very few associations between gender identity and emotions with no significant results present after correcting for multiple testing using Bonferroni corrections. 3. Initially for only a quarter of the emotions there appeared to be a difference in relationship status, but those all turned non-significant after using the Bonferroni corrections. Given the explorative nature of this study there appears to be good interest in these topics for future research.

Bi+ adolescenten zijn als groep erg vatbaar voor een variëteit aan positieve en negatieve ervaringen. Combineer bi+ zijn met of ook trans* zijn of in een relatie zitten en deze effecten kunnen veranderen, zowel positief als negatief. Wat de effecten ook zijn, ze kunnen een grote invloed hebben op de emoties die mensen ervaren. Deze emoties worden in dit onderzoek onderzocht met een set secundaire data met N=1931 bi+ adolescenten, met leeftijden van 16 tot 25 jaar oud. Analyse is gedaan met gebruik van LIWC (Language Inquiry and Word Count) software om tekstuele data the kwantificeren om het bruikbaar te maken voor regressie analyse. Antwoorden werden gezocht voor of er verschil zit tussen positief en negatief emotie gebruik op een vraag over positieve ervaringen, of er verschillen zijn tussen verschillende genderidentiteiten, en of er een verschil is of iemand wel of niet een relatie heeft. Resultaten laten zien dat 1. Bi+ adolescenten meer positieve emotie woorden gebruiken, wat logisch is aangezien de vraag positief was geformuleerd. 2. Er initieel weinig verschillen waren tussen genderidentiteiten en emoties, en helemaal geen significante verschillen na een Bonferroni correctie voor meerdere toetsen. 3. Initieel voor enkel een kwart van de emoties het uitmaakte of iemand wel of niet een relatie had, maar na een Bonferroni correctie bleek geen enkel verschil meer significant. Gegeven dat dit een exploratieve studie was lijkt er voldoende interesse te zijn voor deze onderwerpen voor vervolgonderzoek.

Bisexuality or bi+ is defined as the sexual attraction to more than one gender. Bi+ people tend to experience more risks in their intimate relationships than people in a heterosexual relationship, think of a higher risk for insecurities, stigmatization, or relationship tension (Baams et al., 2021; Mernitz er al., 2022). Furthermore, they might experience a double stigma (Maliepaard, 2021), meaning they get stigmatized for not being heterosexual and for liking more than one gender. This stigmatization exists even in the LGBTQ+ community (Baams et al., 2021). Another risk is that bi+ youth might feel like their sexual identity, an important part of their personal identity, is invisible (Feinstein and Dyar, 2018; McGorray et al., 2023). When they are in a same-sex relationship they are viewed as gay/lesbian but when they are in an other-sex relationship they are viewed as straight. In order to lessen the invisibility, it is important to have space with one's partner to talk about being bi+ (Maliepaard, 2021)

Despite the risks of stigmatization and invisibility, romantic relationships can be a good buffer for experiencing minority stress, however the quality of the relationship does matter (Pepping et al., 2024). Positive romantic involvement also buffers for depression, suicidal ideation, victimization and rejection (Pepping et al., 2024). Being bi+ can therefore contribute to one's life in positive ways, a not uncommon experience, mainly in intrapersonal ways like relationships or the disclosure of one's sexual orientation (Wang and Feinstein, 2020).

However, not all intimate relationships are fully positive, some people have to suffer with intimate partner violence, the probabilities of this happening are increased for bi+ youth (Pollitt and Martin-Storey, 2024). While a person is in an intimate relationship and does experience intimate partner violence it can have negative consequences on their mental state and perceived emotions, possibly resulting in more negatively oriented emotions. Despite all the risks many bi+ youths are very resilient; they seem to not be focusing on the

risks, but more on the positive things of their relationships, heightening the quality of said relationship. Furthermore, this resilience has a positive effect on how bi+ adolescents perceive themselves and on how they feel (Tarantino and Jamison, 2023). Therefore, the emotions that bi+ individuals perceive when in a relationship can be of great influence of how their relationship quality is perceived.

Emotions can have a multitude of social functions depending on the context. One of the social functions of emotions is building feeling of intimacy. Especially positive emotions can improve the interpersonal relationship quality and project more warmth and willingness to cooperate (Sels et al., 2021). Experiencing and expressing more positive emotions helps with maintaining relationships, the past and present relationships have considerable influence on people's emotion experience (Murchinson et al., 2023). Suggesting that positive emotions are linked to being in a relationship, and that those in a good relationship continue to experience more positive emotions. One other social function of emotions is impression; providing information to others, which can lead to reputation improvement, self-monitoring and increased social intelligence. Important for building community and a positive self image (Sels et al., 2021). A third social function of emotions is identity creation; social interactions, social conditions, life experiences, and perceptions of self all help shape identity related emotions (Goffnett et al., 2024). Suggesting a link between the identity that a person gives themselves, like being part of the bi+ community, and their emotion usage. The last social function of emotions is influence; to use emotions to infer motivation of others and predict their future behaviour, important for being in a relationship or as part of a community (Sels et al., 2021).

Certain emotions that help with maintaining and increasing a positive identity, possibly including being part of the bi+ community, are so called self-transcendent emotions (Ji and Raney, 2020). Self-transcendent emotions are emotions that can lead to increased

human connectedness, pro-sociality, flourishing and well-being. These terms are all also important for the building of a community, something which is quite important for bi+ individuals, considering the risks they face (Baams et al., 2021; Mernitz et al., 2022). They are a unique collection of positive emotions that direct focus and attention to others, by witnessing goodness or virtue outside of oneself. Emotions that fall under this category are awe, elevation, admiration, gratitude, and hope (Ji and Raney, 2020).

However, emotions and their usage can differ between people. Umberson and colleagues (2015) found major differences between the cis women and cis men participants (no information was available for gender minorities). Women were found to be more likely than men to view emotional intimacy as an essential aspect for a positive sexual relationship. Women also devoted more discussion to the importance of minimizing the emotional boundaries between partners. When the differences are already major between cis people, the differences could be ever bigger for those that do not identify as cisgender. This clear difference between cis men and cis women can lead to sexism in relationships (Murchinson et al., 2023). Sexism takes place when people are treated unequally and unfairly because others think there are only two genders or sexes (that being men and women) and that everyone should act accordingly to their sex assigned at birth. People also get certain tasks assigned to them by society based on their sexes assigned at birth, like that men should work more, while women need to tend to the house and children. This sexism in relationships can have many negative effects, including on emotional levels. The negative effects are increased for people, including bi+ individuals, who do not follow societies view on gender or 'classic' relationships between a man and a woman. Good romantic partners can be a key source of support for dealing with the negative (emotional) effects of sexism (Murchinson et al., 2023).

For gender minorities (trans*), this emotion usage might also be different from cisgender individuals. Trans* youth are young people who move away from the gender they were assigned at birth, they cross-over the boundaries constructed by their culture to define and contain their gender (Stryker, 2008, p.1). The majority of trans* youth also report having bi+ identities (Pollitt and Martin-Storey, 2024). Young people who are both bi+ and trans* have an even greater risk at stigmatization and discrimination, which in turn has the possibility to give them a less positive view on life and therefore less positive emotion usage (Duran and Nicolazzo, 2017). Apart from the previously mentioned risks, trans* youth who are attracted to the same gender identity as their own might receive more exclusion from society. Dating is therefore increasingly complicated for trans* youth due to the gender roles placed on them by partners, both knowingly and unknowingly, which is also a part of sexism (Duran and Nicolazzo, 2017). For example, some people might see doing chores as a more feminine task and expect their partner to do these tasks even if the partner does not identify as female. Trans* youth struggle with trans-normativity and sexism in relationships, due to the pressures from society on how they need to perform gender. In turn this effect can lead to emotional exhaustion (Duran and Nicolazzo, 2017). Emotional exhaustion takes place when an individual experiences a large amount of negativity, for exampled trans- and biphobia or heteronormativity, that it results in them not feeling, and therefore also not showing or mentioning, as many emotions when dealing with such negativity then they did prior to those experiences.

For trans* youth transphobic and cissexist stereotypes can also create doubt about their desirability as romantic partners (Murchinson et al., 2023). On top of that trans* youth, who also identify as bi+, experience disproportionate levels of intimate partner violence (Pollitt and Martin-Storey, 2024). The partner violence has a strong influence on the perceived relationship quality, with more partner violence leading to lower levels of

perceived relationship quality (Pollitt and Martin-Storey, 2024). People with a low perceived relationship quality can experience less of the buffering status that romantic relationships have on minority stress, depression, suicidal ideation, victimization and rejection (Pepping et al., 2024). It can be so bad that couples with low perceived relationship quality experience less buffering than those who were single. Meaning that the positive buffer effects of being in a relationship goes away when the relationship is not perceived as being of good quality.

An important measure against intimate partner violence is gender equity in a relationship (Closson et al., 2024). Gender equity requires moving away from sexism, the ingrained social expectations and norms of what should be required of men and women in a relationship, not necessarily considering people's own gender identity. Being trans* can liberate some from these traditional norms and roles, but for others it can be challenging. Gender equity can be used to dismantle the hierarchical power structures by sharing power, responsibilities, labour, and decision making. The best way to achieve gender equity is by accommodating and affirming each person's unique skills and identities in a relationship of any kind, be it intimate, platonic, familial, or other (Closson et al., 2024). Gender equity can therefore be achieved in any form of relationships, not just the intimate ones. When gender equity is present in a relationship, the individuals have more chances for experiencing positive emotions in the relationship then when gender equity is not present.

When a relationship has gender equity it can be a source of power and joy, especially for trans* youth (Closson et al., 2024). If not, it can give way for experiences of gender dysphoria, a unique emotional experience, that can lead to negative experiences on both internal and external levels (Budge et al., 2021). Trans* youth can therefore experience a different set of emotions than the gender majority, pre-existing theories do not explain or contextualize how trans* youth describe their emotions. Budge and colleagues (2021)

therefore came up with a new model based on interview data with transgender and gender nonconforming youth. This model is split in 4 quadrants, with a central piece, based on reflective/anticipatory and pleasant/unpleasant. The four quadrants, rank based on which are the most talked about by the participants, are; 1. Reflective unpleasant, with discomfort as most present emotion (especially towards gender expressions) and sadness as second most; 2. Reflective pleasant, with happiness as most common emotion and comfort as second most; 3. Anticipatory unpleasant, with anxiety as most common (in relation to coming out) and fear as second most (relating to feelings of safety); 4. Apathy/neutral, the centre piece in between the four quadrants, often mentioned with binary pronouns and typically emotional situations (bullying, misgendering); 5. Anticipatory pleasant, with hope as most common (relating to acceptance) and excitement as second most (while reflecting on negativity). Showing that reflective emotions are the most common of the first couple, and unpleasant the most common of the other couple. So, trans* youth are more prone to experience negative emotions than they are positive emotions.

Gender identity gives way to its own set of emotion usage, seven specific emotions related to gender can be identified (Goffnett et al., 2024). Similar to the research of Budge and colleagues (2021) these specific gender related emotions are also mainly reflective and unpleasant. The found emotions are shame, sorrow, anger, fear, hope, joy, and pride. Showing that although there are many negative emotions relating to gender, there are also some positive ones. The positive ones seem to be more connected to relationships than the negative emotions, therefore seem more interesting for this specific research.

As shown above, there is knowledge about emotions for adolescents in general, and for trans* adolescents specifically, and there is knowledge about experiences for bi+ adolescents, however there appears to be a lack of knowledge on emotion usage of bi+ adolescents and on the emotion usage of adolescents that identify as both bi+ and trans*.

Therefore, this research aims to explore the emotional experiences of bisexual adolescents' sexual orientation with different gender identities and by relationship status. Resulting in the following research questions: 1. To what extent are positive and negative emotions mentioned by bi+ adolescents in regard to their sexual orientation and 2. Are there differences in the mentioned emotions between different gender identities? And 3. Do the mentioned emotions of those in a relationship differ from those not in a relationship? Expectations are that positive emotions will be mentioned more than negative emotions since the question analysed is positively worded. Also expected is that the 'typical' binary genders of men and women mentioned more positive emotions compared to trans* adolescents, while trans* adolescents mentioned more negative emotions compared to cis men and cis women. And last, expectations are that bi+ participants in a relationship mentioned more positive emotions than those who are not in a relationship.

Methods

Research Design

In order to answer the research questions a mixed-methods cross-sectional correlational design was used. Because of the use of questionnaires with both closed-ended and open-ended questions, there was a need for qualitative language-based analysis in order to analyse the answers on open questions searching for mentions of emotions. This analysis incorporated Linguistic Inquiry and Word Count (LIWC), a text analysis tool for finding the meaning of word/phrase usage (Boyd et al., 2022). LIWC text processing module works by counting all of the words in a text and then calculates the percentage of total words, giving it a score between zero and hundred. That score then corresponds to a specific term or category, for example specific emotions. Making this tool extremely useful for finding emotions and mentions of experiences inside textual data. The LIWC analysis has already

been done by the supervisor, for this research only the results of that analysis will be used to answer the research questions.

In order to check the data for the relational information quantitative analysis was done in SPSS, by way of descriptives, t-tests and regression analysis in order to accurately assess to what extent the emotions are present and whether there is a relation between emotions and gender identity and whether there is a relation between emotions and relationship status.

Research Sample

In order to assess the general population of bi+ adolescents in the Netherlands this research used secondary data from a questionnaire used by the Bi+ research consortium (Baams et al., 2021). This questionnaire had a large sample of $N = 2934$ bi+ participants with ages ranging from 16 till 55, for this research only the answers from the participant between 16 and 25 were considered since those could be seen as adolescents. This still gave a large sample of $N = 1931$ participants, of whom not all finished the questionnaire/answered all questions. At the open-ended questions for emotions there were $n = 642$ missing cases, with the gender identity there were $n = 66$ cases missing, with the relationship status there were $n = 118$ cases missing. The participants were originally recruited via online platforms, with the inclusion criteria that the respondent needed to be part of the bi+ group (agreeing with a definition of this group), and they needed to be at least 16 years old. The sample was not fully representative for the entire Dutch population (mainly white cis-female adolescents), since it only got distributed online and required an interest in participating in research.

Variables

Emotions

From the questionnaire (Baams et al., 2021) the open-ended question: 'what are the good things about your sexual orientation? Could you explain this?' (translated from Dutch)

was used as a base textual data for the LIWC analysis on emotions. The effective use of this tool has been checked for both reliability and validity, by the creators (Boyd et al., 2022). The reliability has been checked with the Kuder-Richardson Formula 20. The validity has been checked by way of correlation between LIWC scores and self-reports. The specific variables are 'Emotion positive' (words that convey general positive emotions) , 'emotion negative' (words that convey general negative emotions), emotion anxiety (words that convey specifically to anxiety emotions), 'emotion anger'(words that convey specifically to anger), and 'emotion sadness (words that convey specifically to sadness)' from the general dictionary (Boyd et al., 2022) and 'awe' (appraisal of something massive that requires adjustment in light of new experiences), 'elevation'(encountering behavioral manifestations of moral beauty and humanities better nature), 'admiration' (Encountering non-moral excellence, extraordinary skill, talent or achievement), 'gratitude' (Sense of wonder, thankfulness or appreciation for life in response to someone doing for you or life), 'hope' (Feelings associated with beliefs that things can change for the better), and 'inspiration' (Awareness of something that transcends ordinary concern, via highly valued approach-oriented motivation) from the self-transcendent emotion dictionary (Ji and Raney, 2020).

Gender identity

From the questionnaire (Baams et al., 2021), the question: 'I feel myself as [this gender]' (translated from Dutch) was used to check for the gender identities of the participants. This question had the answer options: 'male', 'female', 'both male and female', 'sometimes male, sometimes female', 'neither male nor female', 'sometimes male, sometimes female, sometimes non-binary', 'transgender', 'transgender male', 'transgender female', 'I don't know (yet)', or 'other, namely…' (all translated from Dutch). Due to low numbers of participants on certain categories/answer options some were combined to create new ones. The new variables were also transformed into dummy variables to make the

regression analysis possible. The dummy variables are man ($n = 275$), consisting of options 'male' and 'transgender male'; woman ($n = 1233$), consisting of options 'female' and 'transgender female'; gender fluid ($n = 160$), consisting of the options 'sometimes male sometimes female', 'both male and female', 'sometimes male, sometimes female sometimes nonbinary' and a part of 'other, namely…'; non binary ($n = 96$), consisting of the options 'neither male nor female', 'transgender' and a part of 'other, namely…'; (still) unsure ($n = 101$), consisting of the options 'I don't know (yet)'. The answer option 'other, namely…' was manually checked to see what the answers entailed in order to assign them to the new groups, most of them contained either the term nonbinary or a combination of sometimes female/male, sometimes nonbinary.

Relationship status

From the questionnaire (Baams et al., 2021), the question: 'do you have a permanent partner, at this moment' (translated from Dutch) was used to check for the relationship status. This question had the answer options 'Yes, I have one permanent partner', 'yes, I have multiple permanent partners' and 'no', these were also transformed into dummy variables, namely: yes, for partner(s) ($n = 766$) and no partners ($n = 1047$). The answer option for multiple partners was relatively low with $n = 28$, therefore it was placed under the yes partner(s) category along with the 'yes, one partner' option.

Statistical Analysis

All the statistical analyses were done using IBM SPSS 28. Descriptive and frequencies analysis was done on the emotion variables, to check for adequate mention of these emotions by the participants in the open-ended question. A LIWC score from a minimal of 10 is considered to be adequate, aside from that a score of 100 (also the maximum) needed to be present to be considered of adequate mention in the entire sample. In order to answer research question one a one-sample t-test followed for all the emotion

variables, to check whether the mean differed from zero and therefore the emotion variable was mentioned for a meaningful analysis. Any t-test with a $p < .05$ is considered a significant result.

Since the emotion negative variable, from the general dictionary, appeared as a group variable for the combination of emotion anger, emotion sadness and emotion anxiety, they were grouped as the emotion negative variable and only that variable was used further in the regression analyses. Emotion positive, from the general dictionary, was already the only variable about positive emotions in the general dictionary. All other positive emotions came from a different dictionary, there was no other dictionary found for more negative emotions.

Next followed the regression analyses needed to answer the second research question. The regression analyses were done per emotion variable and within those variables per gender identity separately, so that all associations could be analysed as a standalone association. Any regression coefficients with a $p < .05$ is considered a significant result. Considering the high volume of testing (namely 40 associations), and therefore the higher probability of type I errors, a Bonferroni correction followed, which gave the new critical value of $p < .001$.

After the regression analyses for the gender identity and emotion relationship, a frequency analysis followed for the relationship status variable. Next followed the regression analysis needed to answer the third research question. These regression analyses were also done separately per emotion variable. Any regression coefficients with a $p < .05$ is considered a significant result. For these associations, the Bonferroni correction was also performed, which gave the new critical value of $p < .006$.

Results

Emotion Descriptives

The statistical analysis showed that not all participants mentioned emotions during the filling in of the open-ended question about the positive aspects of their sexual orientation. For all the emotions related questions the same amount of participants was missing, that being $n=$ 642 (around 33% of the total sample of $N = 1931$). Of all the other participants, who did fill in the open-ended questions, the descriptives and frequencies are to be found in Table 1. The results showed that most participants did not mention any words related to the emotions, they received the loves possible LIWC score of 0. The one emotion that was mentioned most often is emotion positive with $n = 437$ participants making mention of positive emotion words. The results further showed that in general the positivity related emotions are mentioned more by the participants than the negativity related emotions, though not all positive related emotions are mentioned as much as other positive related emotions. Most of the positive emotions have a LIWC score of 100, which is the highest achievable score, while the emotions Gratitude and Elevation both have a maximum LIWC score of 25, meaning that the language used by the participants to answer the open-ended questions does not contain words strongly associated with these emotions. There is also no one emotion that is mentioned by all participants, seeing as all emotions have the lowest score of zero. Emotion sadness (M = 0.01, SD = 0.20) is the only emotion not mentioned often enough, $t(1288) = 1.846$, $p = .065$, to be considered for further statistical analysis.

Emotions and gender identity

Results of the regression analyses between the emotion variables and gender identities can be found in Table 2. These results showed that there was no associated found between participants their gender identity and their perceived emotions, with a few exceptions. In

Table 1

Descriptives and frequencies of the emotion variables

Emotion variable	Lowest LIWC score	Highest LIWC score	Mean	Standard deviation	LIWC Scores =0[a]	%[b]	LIWC Scores >10[c]	%*[b]
Emotion positive	0	100	2.60	7.20	852	66.1	102	7.9
Emotion negative	0	16.7	0.28	1.20	1202	93.3	4	0.3
Anxiety	0	14.3	0.07	0.67	1266	98.2	1	0.1
Anger	0	9.1	0.05	0.52	1272	98.7	0	0.0
Sadness	0	5.6	0.01	0.20	1285	99.7	0	0.0
Inspiration	0	100	0.78	3.60	1107	85.9	15	1.2
Awe	0	100	1.50	4.90	1006	78.0	47	3.7
Gratitude	0	25	0.47	1.80	1147	89.0	6	0.5
Elevation	0	25	0.25	1.60	1226	95.1	7	0.5
Admiration	0	100	2.20	5.40	910	70.6	73	5.7
Hope	0	100	1.10	6.70	1087	84.3	17	1.3

Note: N=1289. LIWC= Linguistic Inquiry and Word Count. LIWC scores can go from 0(=no mention) to 100 (=full mention).
[a] the amount of participants with a LIWC score of 0, they did not mention this emotion
[b] the amount of participants with a LIWC score above 10, they did mention enough of this emotion
[c] percentages are of the participants that did fill in the questions, excluding the 642 missing cases.

total, only three relationships out of in total 40 associations are initially significant. When using the Bonferroni correction on these 40 associations the new critical value would be $p < .001$ for results to be considered significant, so therefore none of the associations remain significant. Admiration is initially significantly related with both women and the unsure gender identity. The relationship between admiration and women is positive, meaning that women used admiration related wording less then the other gender identities. The relationship

Table 2

Regression analyses between emotion variables and gender identity

Emotion variables	Female			Male			Gender Fluid			Non-binary			Gender Unsure		
	SE	p	β	SE	p	β	SE	p	β	SE	p	β	SE	p	β
Emotion Positive	7.25	.489	.295	7.25	.451	.021	7.24	.153	-.040	7.25	.543	-.017	7.24	.199	-.036
Emotion Negative	1.30	.152	-.040	1.30	.821	.006	1.29	.383	.024	1.29	.483	.020	1.29	.309	.028
Inspiration	3.60	.291	.029	3.60	.708	.010	3.59	**.035***	.059	3.60	.408	-.023	3.60	.901	.003
Awe	4.92	.064	.052	4.93	.509	-.018	4.93	.514	-.018	4.92	.550	-.017	4.92	.160	-.039
Gratitude	1.78	.208	.035	1.78	.425	-.022	1.78	.787	-.008	1.78	.974	-.002	1.78	.107	.045
Elevation	1.56	.251	.032	1.57	.786	-.008	1.57	.676	-.012	1.56	.136	-.042	1.56	.527	-.018
Admiration	5.47	**.006****	.076	4.48	.419	-.023	5.48	.211	-.035	5.48	.292	.029	5.47	**.039***	-.058
Hope	6.67	.680	-.011	6.67	.522	.018	6.66	.247	.032	6.66	.295	-.029	6.66	.408	-.023

Note: $N = 1289$. $Df = 1287$. $*p < .05$. $**p < .01$.

between admiration and the unsure gender identity is negative meaning that people with an

(still) unsure gender identity used more admiration related wording then the other gender

identities. Inspiration is initially significant related with the gender fluid identities and is

positive, meaning that gender fluid identifying people used more inspiration related wording

then the other gender identities. But when considering the Bonferroni corrections with the

new critical p-value of $p < 0.001$ none of these associations remain significant.

Emotions and relationship status

      Results of the regression analyses between the emotion variables and relationship

status can be found in Table 3. These results show that three quarter of the regression analyses

are not significant. Meaning that with the data that is present there is no association to be

found between those emotions and relationship status. In total there are initially 2 significant

results, but when making use of the Bonferroni corrections the new critical value $p<.006$

would deem those associations as non-significant. Emotion positive is initially significantly

Table 3

Regression analyses between emotion variables and relationship status

Emotion variables	In a relationship		
	SE	p	β
Emotion positive	7.24	**.014***	-.069
Emotion negative	1.30	.574	-.016
Inspiration	3.60	.388	.024
Awe	4.92	.107	.045
Gratitude	1.78	.686	.011
Elevation	1.56	**.031***	.060
Admiration	5.48	.168	.038
Hope	6.66	.108	.045

Note: *N = 1289 df = 1287 *p < .05*

related and negatively oriented, meaning that those in a relationship showed more words relating to generally positive emotions than those not in a relationship. Elevation is also initially significantly related but positively oriented, meaning that those in a relation mentioned less elevation related words than those not in a relationship.

Discussion

In the present study multiple aspects were explored: 1. The mentioning of positive and negative emotions by bi+ adolescents in regard to their sexual orientation, 2. Whether those mentioned emotions differed among different gender identities, and 3. Whether the mentioned emotion differed between those in a relationship compared to those that were not in a relationship. Congruent with the expectations, positive emotions were mentioned more often than the negative emotions by the bi+ participants, though not all positive emotions are mentioned in the same amount. There were also many participants that did not mention any words related to the researched emotions.

As for the differences between the gender identities on the mentioned emotions there were initially three emotion and gender identity associations that showed significant results, however, after correcting with Bonferroni corrections no associations remained significant. Therefore, no claims can be made about the association between the perceived emotions of participants and their gender identity.

When looking at the differences between being a relationship compared to not being a relationship only a quarter of the differences were initially significant, however, after correcting with Bonferroni corrections no associations remain significant. Therefore, no claims can be made about the association between the perceived emotions of participants and their relationship status.

The current research showed results similar to what Wang and Feinstein (2020) mentioned in their article, about how being bi+ can contribute to a person's life in positive ways and that being bi+ is not an uncommon experience for those in a relationship or those that disclose their sexual orientation to the world. Our results do however differ from what was to be expected out of the research of Pollitt and Martin-Storey (2024). Their study mentioned that being bi+ gives a disproportionate amount of intimate partner violence, which in turn had a high probability of leading to the usage of more negative emotions. The disproportionate levels of intimate partner violence in their study (Pollitt and Martin-Storey, 2024) seemed even higher for individuals who identified both as bi+ and as trans*, leading to an even higher usage of negative emotions. With the question in the current study being aimed at the positive sides of a person's sexual orientation, there is no knowledge about the possibility of experienced intimate partner violence.

An explanation for the lack of differences found between the emotion variables and the gender identities could be that gender minority youth are more prone to emotional exhaustion. Due to the many forms of transphobia and heteronormativity trans* youth experience, they may mention their emotional states less then cisgender youth (Duran and Nicolazzo, 2017). But sadly, there were no questions in the questionnaire of the current study to control for this fact. The amount of gender equity in relationships could also have been of importance for these findings, even though not all participants in the current study are currently in an intimate relationship they could be in other forms of relationships, like friendships or familial bonds. Noted needs to be that the current study does not account or check for other forms of relationships, so it is not a claim that can fully be grounded in results. Good gender equity in relationships can be a source of joy, though not explicitly present in the current research it could be a placeholder for other positive emotions, especially for trans*

youth (Closson et al., 2024). Bad gender equity however can lead to gender dysphoria, which leads to more negative emotions (Budge et al., 2021). The research of Budge and colleagues (2021) also showed that the unpleasant (=negative) emotions are more common for trans* youth then the pleasant (=positive) emotions. Which differs from the findings in this research, this research shows more mentions for the positive emotions then for the negative ones. The difference in emotion mention could most likely also be explained by the fact that in the questionnaire there was only a question about the positive sides of one's sexual orientation.

A possible explanation for the lack of significant associations between the participants perceived emotions and their relationship status could be that there is no question present in the questionnaire to control for a possible influence of relationship quality. The research of Pepping and colleagues (2024) showed that relationship quality matters for whether participants experience positive or negative effects of being in an intimate relationship.

Even though current research could not find any significant associations between emotions and gender identity, and emotions and relationship status, the lack of evidence could partly be explained by previous statements or by the limitations of the current study explained below.

Limitations

There are several potential limitations concerning the results of this research. Some of the limitations concern the used questionnaire; the question asking for gender identity gave the opportunity to the participants to pick multiple options regarding their gender identity. The ability to pick multiple options could result in the possibility that one participant could end up in multiple different groups during analysis, for example as both a woman and a nonbinary person. This fact gives the potential of an inflation of type I errors, for which this research did correct. A method that could be used to eliminate this problem is to analyse

whether one participant is indeed present in multiple different groups, and if that is the case eliminate that one participant for that specific analysis. Another potential fix could be to have the question in such a way that only one option is accepted as an answer. The questionnaire furthermore contained mainly multiple-choice questions, and only five of the in total more then hundred questions were open-ended. The few open-ended questions did give enough data for analysis, but there remains the possibility that more textual data would give stronger results. Also seeing that most participants did not use any emotion related words, more questions could potentially fix this problem. The more questions there are where participants could answer with emotion related words, the more possibility there is for associations between the variables. The only open-ended question that gave good possibility to participants for answering with emotion related words was only asking the participants about the positive sides of their sexual orientation, missing potential data about negative perceived emotions regarding their sexual orientation. Further research should then include either a fully neutral question about how participants would describe how they feel about their sexual orientation, or include both positively and negatively framed questions in the questionnaire.

There were also some limitations regarding the used LIWC analysis tool for this specific study; not all the emotions that were often found in previous literature related to gender identities (Budge et al., 2021; Goffnett et al., 2024) were part of the LIWC analysis. Giving possibility to missing valuable data. Of the common emotions of trans* youth found in the research of Goffnett and colleagues (2024) only three out of seven were present in the LIWC dictionaries, with a fourth only present in a similar emotion. The emotions Shame, Joy and Pride were missing for the LIWC analysis. Apart from that there were also some LIWC variables that were group variables, while others were standalone variables; the emotion positive and emotion negative variables were grouped variables (with emotion negative also

having several standalone versions also present), while the self-transcendent emotions (Ji and Raney, 2020) were all standalone variables. Making way to a potential difference in results between those variables. In order to be able to research the full extend of emotions that bi+ and trans* adolescents can perceive, more dictionaries need to be made or considered for analysis, for example one with specific negative emotions or emotions that are common for trans* youth (Budge et al., 2021; Goffnett et al., 2024).

Recommendations

This study's main purpose is to be explorative of the potential differences between the emotion usage of multiple groups of bi+ youth. This study did not aim to give clear cut answers to the questions what the differences are exactly if they are even present at all. It did give way to future research that those posed differences are interesting to continue to research. So, in addition to the fixes of this studies limitations already mentioned, several recommendations can still be made. One of which could be that future research could consider testing for the effects of possible mediators or moderators. For example, the potential presence of intimate partner violence or the qualities of previous relationships prior to the current one. Another recommendation could be that for the analysis of emotions with trans* youth the trans* unique emotion gender dysphoria could be included. It is an emotion often experienced by trans* youth in current societies, and therefore could hold valuable information about the emotion usage of trans* youth, especially in the intersectionality of also being bi+. Future research could also consider doing a similar type of study on adult participants, the effects of being bi+, or trans* in society could be of bigger impact on those that lived longer in the current societies. It could also be valuable to use the same analysis tool on more text rich data, to potentially gain more significant results that can further increase our understanding of the intersectionality of bi+ youth and trans* youth.

Conclusion

Despite the limitations, this research can be seen as a first step towards understanding the emotion use of bi+ adolescents and the intersectionality between being bi+ and being trans*. Although this research did not find any significant differences in emotion use for either different gender identities among bi+ adolescents nor different relationship statuses, there does appear to be adequate interest for future research with these topics.

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