




The Impact of Stressful Life Events on Suicidal Ideation in Gender Dysphoria: A Moderator Effect of Perceived Social Support

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Abstract

Factors associated with suicidal ideation in the gender dysphoria population are not completely understood. This high-risk population is more likely to suffer stressful events such as assault or employment discrimination. This study aimed to determine the association of stressful events and social support on suicidal ideation in gender dysphoria and to analyze the moderator effect of social support in relation to stressful events and suicidal ideation. A cross-sectional design was used in a clinical sample attending a public gender identity unit in Spain that consisted of 204 individuals (51.7% birth-assigned males and 48.3% birth-assigned females), aged between 13 and 59 ($M = 27.95$ years, $SD = 9.58$). A Structured Clinical Interview, a list of 16 stressful events, and a functional social support questionnaire (Duke-UNC-11) were used during the initial visits to the unit. The data were collected between 2011 and 2012. A total of 50.1% of the sample have had suicidal ideation. The following stressful events were associated with suicidal ideation: homelessness, eviction from home, and having suffered from physical or verbal aggression. Also, there was an inverse relation between perceived social support and suicidal ideation. There was a statistically significant interaction between a specific stressful event (eviction) and perceived social support. The study suggests that the promotion of safer environments could be related to lower suicidal ideation and that networks that provide social support could buffer the association between specific stressful events and suicidal ideation.

Keywords Suicidal ideation · Social support · Gender dysphoria · Transgender

Introduction

The high risk of suicidal behavior is a significant problem for those who have gender dysphoria (Fitzpatrick et al., 2005; Lobato et al., 2007; Zucker et al., 2016), with approximately

one out of three adults with this condition having experienced suicidal behavior. The prevalence of suicide attempts in this population is elevated in comparison with non-gender dysphoric individuals (Boza & Nicholson Perry, 2014; Bradford et al., 2013; Bolger et al., 2014; Grant et al., 2011; Guzmán-Parra et al., 2016; Haas et al., 2014; Nuttbrock et al., 2010; Peterson et al., 2017), and it remains high even after sex reassignment surgery (Dhejne et al., 2011). Also, death by suicide is higher than expected in the transgender population undergoing hormone treatment (de Blok et al., 2021).

It is well-established such as suicidal ideation is an important risk factor for suicide attempts in gender dysphoria (Nock et al., 2008). The prevalence of suicidal behavior in people suffering gender dysphoria is higher than in the general population; for example, one study found a prevalence of 53% in current ideation (Kim et al., 2006) and different studies between 50 and 73.6% in lifetime ideation (Guzmán-Parra et al., 2016; Hoshiai et al., 2010; Modrego Pardo et al., 2021; Terada et al., 2011). This rate of lifetime prevalence of suicide ideation is comparable to the rates found in people at ultra-high risk of psychosis (66.0%) (Taylor et al., 2015), and with major depressive disorder (53.1%) (Cai et al., 2021). Moreover, one study found characteristics feature in a sample of non-binary psychiatric inpatient individuals with suicidal ideation in comparison with control psychiatric inpatients with suicidal ideation (Zinchuk et al., 2022).

There are different possible explanations for the high prevalence of suicidality in the gender dysphoria population. For example, one hypothesis is that a “primary” mental disorder could influence the presence of gender dysphoria or that gender dysphoria is inherently distressing (Zucker, 2019). However, nowadays the most common and accepted model to explain the high prevalence of suicidality is based on minority stress suffered by this population. According to the minority stress model (Meyer, 2003), recently adapted to the transgender and gender nonconforming population (Hendricks & Testa, 2012), the transgender population is frequently victim of many external factors (intra-familial and extra-familial factors) such as stressful events, including physical and sexual violence, discrimination, victimization, harassment, poverty, rejection, exclusion, and trauma (Bauer et al., 2015; Clements-Nolle et al., 2006; Goldblum et al., 2012). This may be related to individual knowledge, perception, or identification with the minority status, which consequently leads to expectations of rejection, concealment of one’s own gender identity, and internalized transphobia (Hendricks & Testa, 2012; Meyer, 2003).

The minority stress model had been combined with the interpersonal theory of suicide to explain the relationship between minority stress and suicide behavior (Joiner, 2021; Testa et al., 2017). Negative mental health effects, such as a high number of symptoms of depression, anxiety, personality problems, and especially suicide behaviors and ideation (Guzmán-Parra et al., 2016; Heylens et al., 2014; Khobzi Rotondi, 2012), may be the consequence of stress experienced by transgender people (Nemoto et al., 2011). Recent systematic reviews and meta-analyses support the association between internal and external minority stress and suicidal ideation in the transgender population and have summarized the different factors and effect sizes associated with suicidal ideation (Gosling et al., 2022; Pellicane & Ciesla, 2022). In summary, various demographic factors, e.g., age, the stage of transition (Terada et al., 2011); external factors, e.g., physical violence, sexual abuse (Goldblum et al., 2012); internal factors, e.g., perceived prejudice and discrimination, enacted and internal stigma (Bauer et al., 2015; Clements-Nolle et al., 2006; Inderbinen et al., 2021); and mental health issues, e.g., impulsivity and sensation seeking (Liu & Mustanski, 2012) have been associated with suicidability in gender non-conforming population.

However, more evidence is still needed on the relationship between specific factors related to stress and the presence of high rates of mental disorders and suicidality in the gender dysphoria population. Furthermore, there are protective factors that minimize the impact of stressful events on this population, and these factors may moderate the negative effects of stress. In one study, family and peer support, as well as pride in one’s identity, were all inversely associated with psychological distress, suggesting that these are protective factors in gender dysphoria (Nemoto et al., 2011). In another study, peer support significantly moderated the relationship between enacted stigma and psychological distress, thus emerging as a resilience factor in the face of actual discriminatory experiences (Bockting et al., 2013). Moreover, social support and positive events synergistically buffered the relationship between negative events and suicidal ideation (Kleiman et al., 2014). Also, a lower perceived social support from their immediate family in comparison with their non-transgender siblings (Factor & Rothblum, 2007), and less social support from biological family members was observed (Nemoto et al., 2011). Furthermore, it has been shown that transgender individuals with a history of suicidal ideation had expressed higher need for social support (Nemoto et al., 2011). In addition, parental support for gender identity has been associated with reduced suicidal ideation among transgender individuals (Bauer et al., 2015). Moreover, a previous study conducted in Spain had shown that greater perceived family support was related to a better perceived physical, psychological, social, and environmental well-being of gender dysphoric individuals (Gómez-Gil et al., 2013).

Despite this, limited published data exist regarding the relation of stress factors or social support with suicidal ideation in the clinical gender dysphoric population. The main objective of this study was to examine the role and interaction of stressful events and perceived social support on suicidal thoughts in a clinical sample of gender dysphoric individuals.

Method

Participants and Procedure

This study was part of an ongoing project initiated in the year 2000: “Transsexualism in Andalusia: Psychiatric, endocrine and surgical morbidity and evaluation of the therapeutic intervention process: Experiences of the first reference unit in Spain.” The study was approved by the hospital ethics committee. The evaluations were conducted in 2011–2012 by clinical psychologists trained in patient diagnosis and

evaluation, and also in the administration of the research instruments used for the study.

The sample consisted of 204 patients attending the Transsexual and Gender Identity Unit (TGIU) at the University Regional Hospital of Málaga (51.7% trans women and 48.3% trans men), aged between 13 and 59 ($M = 27.95$ years, $SD = 9.58$, 15 participants under 18 years). In trans women, 86.7% were androphilic, 9.5% gynephilic, 2.9% biphilic and 1% asexual. In trans men, 93.9% were gynephilic, 3% androphilic, 2% biphilic and 1% asexual. A consecutive series of participants were invited to participate in this study from those being assessed or treated at the hospital TGIU. The only inclusion criteria were to have a diagnosis of gender dysphoria in accordance with the CIE-10 (World Health Organization, 2010) as assessed by a clinical psychologist. The exclusion criteria to be treated in the TGIU were to have a diagnosis of psychotic disorders or severe personality disorders that could interfere with the treatment according to the clinical criteria of a psychologist. Approximately, 7.8% of users were excluded at the TGIU for those exclusion criteria. Informed consent was obtained from all individual participants included in the study, and parents also signed the informed consent for participants under the age of 18. There was a total of 242 eligible patients during the study period, 18 (7.4%) did not meet the inclusion criteria, 19 (7.8%) did not complete the assessment, and one (0.4%) refused to participate in the study.

Measures

Structured clinical interview. This specific instrument was designed at the TGIU and was administered to collect demographic and clinical data. It was used to collect the following variables: (1) sociodemographic information: age, gender, civil status, education, and employment status; (2) lifetime suicidal ideation. The presence of suicidal ideation was assessed with the following question: “Have you ever felt so sad that you thought of committing suicide?”.

Stressful life events were assessed using a list of 16 stressful life events (see Table 2).

The Duke-UNC Functional Social Support Questionnaire. The DUKE-UNC (Broadhead et al., 1988) evaluates perceived social support with 11 items using a 5-point Likert scale (Table 3). The scale ranges from “much less than I would like” to “as much as I would like.” We used the Spanish version of the scale (Bellón Saameño et al., 1996). In our sample, the scale had good internal consistency (Cronbach’s $\alpha = 0.90$).

Statistical Analysis

Two groups were established based on the presence of lifetime suicidal ideation. Sociodemographic information was

analyzed with the chi-square test as all the variables were categorical. To analyze the association between stressful events and perceived social support with suicidal ideation, bivariate and multivariate analyses using logistic regression were carried out. In the multivariate analysis, age, gender, and occupational status were used as possible confounding factors. To test the moderator effect of perceived social support on the association between stressful events and suicidal ideation, the procedure devised by Baron and Kenny (1986) was used. We tested the moderator effect of perceived social support on stressful events that were statistically significantly associated with suicidal ideation ($p < 0.05$). The statistical analyses were performed using version 15.0 of the SPSS statistical software package (SPSS Inc., Chicago, IL).

Results

A total of 50.1% of individuals in the studied population expressed lifetime suicidal ideation. The results of the comparative analysis found no significant differences between groups in gender, age, educational level, marital status, occupational status, and sexual orientation (Table 1).

The most frequent stressful events in the sample were to be the object of physical or verbal aggression (80.9%) and the

death of a relative (71%). The least frequent events were the death of the partner (2.5%) and incarceration (4.4%). Different stressful events were associated with suicidal ideation reaching a significant level of confidence: loss of home (OR = 7.00; $p = 0.012$), eviction (OR = 2.41; $p = 0.032$), and being the object of physical or verbal aggression (OR = 2.46; $p = 0.016$). In the multivariate logistic regression models adjusted by gender, age, and occupational status, the same stressful events maintained a significant level of confidence: loss of home (AOR = 7.57; $p = 0.010$), eviction (AOR = 2.56; $p = 0.024$), and to be the object of aggression (AOR = 2.37; $p = 0.026$). The information regarding stressful events is summarized in Table 2.

Perceived social support ($M = 43.49$; $SD = 9.80$; range = 14–55) was significantly associated with the presence of suicidal ideation (OR = 0.95; $p = 0.002$) and was also adjusted for possible confounders (AOR = 0.95; $p = 0.001$). The DUKE-UNC-11 items significantly associated with suicidal ideation were: “I receive help on home-related issues” (OR = 0.79, $p = 0.018$; AOR = 0.75, $p = 0.007$), “I have people who care about what happens to me” (AOR = 0.73, $p = 0.025$), “I receive love and affection” (OR = 0.73, $p = 0.008$; AOR = 0.70, $p = 0.004$), “I have the chance to talk about my problems at work/home with somebody” (OR = 0.65, $p < 0.001$; AOR = 0.63, $p < 0.001$), “I have a chance to talk about my personal and family problems with somebody” (OR = 0.71, $p = 0.005$; AOR = 0.69, $p = 0.004$), “I’m able to talk about my economic problems with

Table 1 Sociodemographic characteristics in gender dysphoric individuals with and without suicidal ideation

	Suicidal ideation N (%)	No suicidal ideation N (%)	<i>p</i>	χ^2
Gender			0.478	0.50
Trans women	51 (49.0)	54 (54.0)		
Trans men	53 (51.0)	46 (46.0)		
Age			0.146	- 1.45
Mean (SD)	26.91 (9.09)	29.08 (10.02)		(Mann-Whitney U test)
Educational level			0.991	0.08
Primary	24 (23.3)	23 (23.0)		
Secondary	63 (61.2)	62 (62.0)		
University	16 (15.5)	15 (15.0)		
Marital Status			0.404	0.69
Married/Living with partner	19 (18.3)	23 (23.0)		
Single	88 (81.7)	77 (77.0)		
Occupational status			0.351	0.87
Employment/Other	61 (58.7)	65 (65.0)		
Unemployment	43 (41.3)	35 (35.0)		
Sexual orientation			0.805	0.98
Heterosexual ^a	94 (91.3)	89 (89.0)		
Homosexual	5 (4.9)	8 (8.0)		
Bisexual	3 (2.9)	2 (2.0)		
Asexual	1 (1.0)	1 (1.0)		

^aGynephilic for trans men and androphilic for trans woman

Table 2 Stress events associated with the presence of suicidal ideation

Different stress events	Total N (%)	Suicidal ideation N (%)	No suicidal ideation N (%)	OR unadjusted	OR adjusted
Death of a relative	145 (71.1)	74 (71.2)	71 (71.0)	1.01	1.00
Death of partner	5 (2.5)	2 (1.9)	3 (3.0)	0.63	0.73
Death of siblings	10 (4.9)	5 (4.8)	5 (5.0)	0.96	1.55
Death of the mother	24 (11.8)	11 (10.6)	13 (13.0)	0.79	1.00
Death of the father	39 (19.1)	18 (17.3)	21 (21.0)	0.79	1.02
Death of a close friend	66 (32.4)	31 (29.8)	35 (35.0)	0.79	0.85
Separation or divorce	68 (33.3)	41 (39.4)	27 (27.0)	1.76	1.68
Loss of employment	61 (29.9)	36 (34.6)	25 (25.0)	1.59	1.68
Loss of home	15 (7.4)	13 (12.5)	2 (2.0)	7.00*	7.56*
Eviction	32 (15.7)	22 (21.2)	10 (10.0)	2.41*	2.56*
Being arrested	19 (9.3)	13 (12.5)	6 (6.0)	2.24	2.48
Incarceration	9 (4.4)	5 (4.8)	4 (4.0)	1.21	1.54
Serious illness of the parents or partner	69 (33.8)	34 (32.7)	35 (35.0)	0.90	1.04
Suffering from a serious illness	28 (13.7)	16 (15.4)	12 (12.0)	1.33	1.73
Taking care of someone with a chronic illness	49 (24.0)	29 (27.9)	20 (20.0)	1.55	1.94
To be the object of physical or verbal aggressions	165 (80.9)	91 (87.5)	74 (74.0)	2.46*	2.37*

OR adjusted by gender, age and occupational status; * $p < 0.05$. ** $p < 0.01$

somebody" (OR = 0.78, $p = 0.031$; AOR = 0.75, $p = 0.020$), "I receive useful advice when something important happens in my life" (OR = 0.76, $p = 0.033$; AOR = 0.76, $p = 0.030$),

and "I receive assistance when I am sick" (AOR = 0.76, $p = 0.039$). The information about perceived social support is summarized in Table 3

Table 3 Association between perceived social support and suicidal ideation

Social Support (DUKE-UNC-11)	Total M (SD)	Suicidal ideation M (SD)	No suicidal ideation N M (SD)	OR unadjusted ^a	OR adjusted ^a
Total Score	43.49 (9.80)	41.39 (10.60)	45.68 (8.41)	1.05**	1.05**
<i>Different items</i>					
I receive visits from friends and family	3.31 (1.36)	3.16 (1.34)	3.46 (1.38)	0.85	0.84
I receive help on home related issues	3.43 (1.43)	3.19 (1.45)	3.67 (1.37)	0.79*	0.75**
I receive proper recognition when I do a good work	3.67 (1.33)	3.51 (1.41)	3.83 (1.23)	0.83	0.83
I have people who care about what happens to me	4.31 (1.08)	4.16 (1.20)	4.46 (0.93)	0.77	0.73*
I receive love and affection	4.06 (1.26)	3.83 (1.34)	4.30 (1.13)	0.73**	0.70**
I have the chance to talk about my problems at work/home with somebody	4.10 (1.30)	3.78 (1.46)	4.44 (1.02)	0.65**	0.63**
I have the chance to talk about my personal and family problems with somebody	4.20 (1.22)	3.96 (1.38)	4.45 (0.97)	0.71**	0.69**
I'm able to talk about my economic problems with somebody	4.18 (1.24)	3.99 (1.31)	4.37 (1.14)	0.78*	0.75*
I receive invitations for leisure activities and/or dating	3.76 (1.24)	3.63 (1.28)	3.90 (1.19)	0.84	0.84
I receive useful advice when something important happens in my life	4.08 (1.15)	3.91 (1.18)	4.26 (1.10)	0.76*	0.76*
I receive assistance when I am sick	4.40 (1.12)	4.26 (1.21)	4.54 (0.98)	0.79	0.76*

OR adjusted by sex, age, and occupational status; * $p < 0.05$; ** $p < 0.01$

The moderator effect of perceived social support on stressful events was statistically significant only in the case of eviction from home ($p = 0.046$). The information regarding interaction effects in this population is summarized in Table 4.

Discussion

This study examined the associations and interactions between suicidal ideation, stressful events, and perceived social support in a clinical sample with gender dysphoria.

We found that selective stressful events (loss of home, eviction, and being the object of aggression) and perceived social support were associated with suicidal ideation. Moreover, we also found a moderation effect of perceived social support for a stressful event regarding suicidal ideation, specifically eviction from the home.

Previous studies have shown that some stressful events (e.g., suffering physical and sexual violence, discrimination, or trauma) were related to suicidal behavior in the trans population (Bauer et al., 2015; Clements-Nolle et al., 2006). The above-mentioned stresses could be conceptualized as

Table 4 Moderator analysis of social support on stress events

Dependent variable: Suicidal ideation	OR adjusted	p values
<i>Model 1: Loss of home</i>		
Loss of home	8.71	0.546
Social Support (DUKE-UNC-11)	1.07	0.699
Loss of Home Social support (DUKE-UNC-11)	0.99	0.909
<i>Model 2: Eviction</i>		
Eviction	0.10	0.035
Social Support (DUKE-UNC-11)	0.92	0.205
Eviction Social support (DUKE-UNC-11)	1.08	0.046
<i>Model 3: Suffered aggressions</i>		
Suffered aggressions	12.29	0.238
Social Support (DUKE-UNC-11)	1.10	0.090
Suffered Aggressions Social support (DUKE-UNC-11)	0.96	0.402

minority stressful events connected with unobvious sex, putting this population at special risk (Factor & Rothblum, 2007). In light of all revised data, there are factors such as a large prevalence of aggression, increased violence, harassment, and discrimination toward nonconforming gender people that may affect their mental health (Carter et al., 2019; Cogan et al., 2021; Guzman-Parra et al., 2014; Lelutiu-Weinberger et al., 2020; Rabasco & Andover, 2021; Testa et al., 2012). Institutions should make an effort to create and implement preventive programs and safe environments for the gender dysphoric population (Meyer, 2014; Vaughan & Rodriguez, 2014).

The group without suicidal thoughts was characterized by a significantly higher score of perceived social support. The most significant item was the possibility to talk to someone at work or home about problems. The results of our study concerning social support can be discussed mostly in the light of data from transgender and gender non-conforming samples. Recent research suggests that social support is a protective factor against suicide ideation and suicidal behavior in the gender non-conforming population (Bauer et al., 2015; Romanelli & Lindsey, 2020; Treharne et al., 2020). Specifically, community connectedness (Rabasco & Andover, 2021) and support (Shah et al., 2018), family and friend support (Carter et al., 2019; Moody & Smith, 2013), and partner support (Kota et al., 2020) have been negatively associated with suicidal ideation. However, one study did not find an association between access to trans support groups and suicidal attempts (Zwickl et al., 2021). Transgender individuals received less social support from within the family in comparison with their non-trans siblings, whereas no significant difference was found in experiencing social support from friends (Factor & Rothblum, 2007). Difficulties with obtaining support from significant relatives may partly explain the high suicidal ideation rates among transgenders (Clements-Nolle et al., 2006), and our study is in accordance with previous results in clinical samples with a diagnosis of gender dysphoria. It has also been emphasized that social support is needed especially during sexual reassignment transition (Budge et al., 2012). Our study demonstrates that persons who report that they can talk about their different problems also report less suicidal ideation. These results revealed the importance of a social network outside the family and highlights the influence of the community and friends. Social inclusion (social support, gender-specific support from parents, and identity documents), protection from transphobia (interpersonal and violence), and undergoing medical transition have the potential for sizeable effects on the high rates of suicidal ideation and attempts in transgender communities (Bauer et al., 2015).

According to our findings, social support could play a relevant role in moderating, at least in part, the effects of stressful events on suicidal ideation. One study found that

family and friend support did not moderate the association between discrimination and suicidal ideation; however, a significant moderation effect of trans friends' support and connection with LGTB people and veterans was found (Carter et al., 2019). Specifically, general social support could be important as a buffer between socioeconomic problems and suicidal ideation. Moderating the effect of social support in stressful events over suicidal ideation also stands in line with the minority stress model as social support is a protective factor, which attenuates the effects of stressors on suicidal ideation. Ensuring social support for transgender individuals may promote better mental health and is a low-cost strategy with high payoffs (Snapp et al., 2015).

Limitations

This research had some limitations. The hospital sample was not representative of the whole population with gender dysphoria, as an unknown proportion of these individuals did not actively seek sex reassignment surgery, and therefore, these individuals did not visit the TGIU. The exclusion criteria for the treatment in the unit could influence the underestimation of the results. It is probable that other variables are associated with suicidal ideation that have not been taken into consideration and would be important in a study of this nature. There is no control group from the general population. Moreover, since this is a cross-sectional study, a causal relationship between variables cannot be established, nor with the factors involved in the etiology of suicidal ideation in this specific clinical population. Future studies should use a more diverse and larger sample to increase the generalizability of the results. We also recommend investigating whether these findings can be replicated in other cultures and nationalities. Another limitation is the relatively poor measure of suicidal ideation based on the question done to the participants.

Conclusion

In conclusion, we can state that the results of our study support our first hypothesis concerning the presence of stressful events associated with suicidal thoughts and identified protective and risk factors for suicidal ideation in a clinical population with gender dysphoria. Moreover, it identified the moderating effects played by social support in the relationship between stressful events on suicidal ideation. Despite the limitations, the study provides support for a model in which social support acts as a moderator of the relationship between specific stressful life events and suicidal ideation.

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Declarations

Conflict of interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or regional research committee (Malaga Province Ethical Committee, without reference number) and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent All participants signed an informed consent form before participating in the study.

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