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# Factors affecting relationship issues among clients attending youth mental health promotion services in India

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## Abstract:

**BACKGROUND:** India today is home for the largest youth population in the world. Youth is a formative phase transitioning from childhood to adulthood. Relationship is fundamental for a healthy and satisfactory life. Relationships assume importance and maturity during adolescence and youth. Relationships and mental health have a bidirectional effect. The effect of relationships on mental health is stronger than vice versa.

**MATERIALS AND METHODS:** Two-year case record analysis of 8595 beneficiaries aged 15–35 years attending youth guidance centers (Yuva Spandana Kendras) in Karnataka, India, was undertaken to understand factors affecting relationship issues among them. Multivariate logistic regression was performed with any beneficiary having a relationship issue as outcome.

**RESULTS:** Being a student (adjusted odds ratio [AOR] = 1.49; 95% confidence interval [CI] = 1.18–1.89), occupation (AOR<sub>business/salaried</sub> = 3.04; 95% CI = 2.10–4.40 and AOR<sub>others</sub> = 1.72; 95% CI = 1.22–2.44), marital status (AOR<sub>married</sub> = 1.42; 95% CI = 1.06–1.90 and AOR<sub>others</sub> = 3.44; 95% CI = 1.45–8.15), having health and lifestyle issues (AOR = 3.61; 95% CI = 3.05–4.27), personality issues (AOR = 2.88; 95% CI = 2.43–3.41), safety issues (AOR = 6.28; 95% CI = 5.01–7.87), gender, sex, and sexuality issues (AOR = 3.10; 95% CI = 1.93–4.98), suicidality (AOR = 1.82; 95% CI = 1.17–2.85), alcohol use (AOR = 5.43; 95% CI = 3.92–7.41), and different emotions experienced (AOR ranging from 0.37 to 3.50), had significant association with relationship issues.

**CONCLUSION:** Investing in health promotion interventions focusing on these precursors of relationship issues among youth seems strategic. Our findings have implications for other states in India and other low-middle-income countries like India.

## Keywords:

Mental health, relationship, youth

## Introduction

Youth is a formative phase transitioning from childhood to adulthood. India is home for the largest youth population in the world. About 30% of India's population comprise youth.<sup>[1]</sup> Considering this magnitude, ensuring their overall health is critical to cash in on the demographic dividend of having a young productive population. Maintaining their prime health

or improving their existing health through health promotion strategies is likely to yield better results than a disease-focused strategy. Period of youth and adolescence is largely disease-free compared to childhood and adulthood.

However, behaviors practiced during youth/adolescence such as eating, physical activity, habits, relationships, and other lifestyles carry their effect into adulthood.<sup>[2]</sup> All these are considered risk factors to develop mental

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health problems. Understanding the precursors of these risk factors will provide important inputs to eventually reduce the occurrence of mental health problems. This strategy of looking upstream by intervening at the level of these factors is likely to reduce mental health problems later in life.

It is known that 7.9% of Indians aged 18–29 years suffer from some form of mental morbidity.<sup>[3,4]</sup> This can affect their well-being and mental health as adults. However, prevalence of common mental disorders such as anxiety and depression and substance use is the least among those aged 18–29 years compared to older individuals.<sup>[3]</sup> However, the disease process is known to begin during adolescence and youth.<sup>[5]</sup> The risk factors of mental health problems such as substance use, relationship issues, education, and academic issues mostly begin during youth.<sup>[6–8]</sup> The effect of substance use, education and academic performance and career on mental health problems are well understood.<sup>[7,8]</sup> The precursors affecting these have also been understood. There are studies looking at the effect of relationships on mental health.<sup>[9,10]</sup> Relationships are fundamental for an individual’s health and well-being. Relationships assume importance and maturity during adolescence and youth. As psychosocial and cognitive aspects develop, relationships tend to shape and attain maturity during youth.<sup>[11]</sup> Relationships and mental health have a bidirectional effect with each other. However, it is known that the effect of relationships on mental health is stronger than vice versa.<sup>[6]</sup> Relationships during youth are formative of the kind of relationships that emerge during adulthood. It can be relationships with parents, peers, romantic relationships, virtual relationships, societal relationships, intergenerational relationships, etc. There are studies focusing on marital/romantic relationships<sup>[9]</sup> or peer relationships.<sup>[10]</sup> There are other relationships such as virtual relationships such as social media interactions, professional relationships, and relationships with family including parents and intergenerational relationships. Understanding relationship issues and learning to cope with it early during youth is likely to reduce mental health problems over time. However, studies understanding precursors affecting relationships among youth in large community settings and their effects on mental health are minimal. The program Yuva Spandana (meaning responding to youth) provides such a unique opportunity.

Yuva Spandana is a unique first-of-its-kind youth mental health promotion services program in Karnataka,<sup>[12]</sup> a state in southern India. Yuva Spandana is a Karnataka state youth policy initiative where Youth named Yuva Samalochakas (meaning youth counselors) and Yuva Parivarthakas (meaning change agents of youth) provide mental health promotion services through centers/

clinics named Yuva Spandana Kendras (meaning youth response centers). These services include guidance/ counseling and referral services for six major issues among youth, namely education and academic issues, safety issues, health and lifestyle issues, personality development issues, relationship issues, and gender, sex, and sexuality issues. These centers are situated in district stadiums across 30 districts of Karnataka. This program focuses on youth aged 15–35 years.

This study looks at factors associated with relationship issues among youth attending mental health promotion service centers in Karnataka. This study throws light on factors that are precursors to develop relationship issues among adolescents and youth. Understanding these factors would help health promotion interventions to prevent mental health issues among them in later life.

## Materials and Methods

### Study design and setting

Case records analysis of beneficiaries who attended mental health promotion services clinic under Yuva Spandana in Karnataka between January 01, 2017, and December 31, 2019, for this study.

### Study participants and sampling

All beneficiaries aged between 15 and 35 years with both registration and first visit details were considered for the study [Figure 1].

There were 9954 beneficiaries who were registered during the study period. Out of this, there were 8799 beneficiaries aged between 15 and 35 years and 8733 beneficiaries had both registration and visit forms. There were 138 beneficiaries who were registered twice.

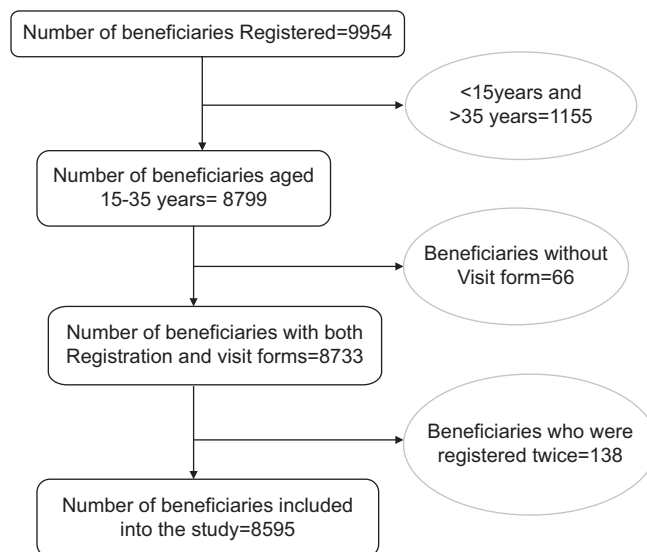


Figure 1: Process of selection of study subjects

The duplicates were excluded. These duplicates were confirmed by their name, phone number, and address. Finally, 8595 beneficiaries were included for analysis.

### Data collection tool and technique

Beneficiary registration and first visit details during registration were considered for this analysis. Beneficiary registration details included basic sociodemographic details, center information, address, age, gender, level of education, marital status, occupation, hobbies, and sociodemographic details of significant others along with beneficiary's habit of smoking, drinking, and consumption of drugs.

The visit details included issues which the beneficiaries report and their perceived relationship with their family members, parents, friends, and neighbors. In addition, visit details included a set of 18 "yes/no" questions related to emotions or feeling, which they might have experienced and ways of coping. These questions were related to feeling depressed, feeling anxious, feeling lonely, feeling tired or helpless, feeling excessively worried, experiencing loss of interest in work, experiencing loss of ability to make decisions, forgetfulness, concentration-related problems, suicidal ideation, and guilt.

### Statistical analysis

A conceptual framework considering different hypothesized factors within the beneficiary registration and visit forms were developed [Figure 2]. Sociodemographic characteristics of the beneficiary, different emotions they face, and other types of issues being reported besides relationship issues were hypothesized to be associated with relationship issues among youth attending Yuva Spandana Kendras. In addition, substance use, types of other issues reported

by the beneficiary, and suicidality were hypothesized as risk factors of relationship issues [Figure 2].

Univariate and multiple logistic regression analyses were performed with self-report of having a relationship issue as outcome. All variables in the conceptual framework were hypothesized as exposure variables [Figure 2]. All hypothesized exposure variables significantly associated with the outcome at 10% level ( $P < 0.10$ ) in univariate analysis were considered eligible to be included into the multivariate model. These variables were included in the multivariate model one after the other using a forward stepping process. Those variables significant at 5% ( $P < 0.05$ ) level and changed the odds ratio of at least one previous variable by 10% were retained in the final model. The significance of including a variable into the final model was tested using likelihood ratio test comparing the model without that variable. The goodness of fit for the final multiple logistic regression model was assessed using Hosmer–Lemeshow test for goodness of fit and ROC curve was drawn to check the discrimination ability of the final multiple logistic regression model. All the descriptive analysis was performed using Microsoft Excel 2007. Logistic regression analysis was performed using Stata version 12.0 software Stata Corp, California for Windows.

### Ethical consideration

The ethical approval for this study was obtained from the Institutional Ethics Committee of NIMHANS, Bengaluru.

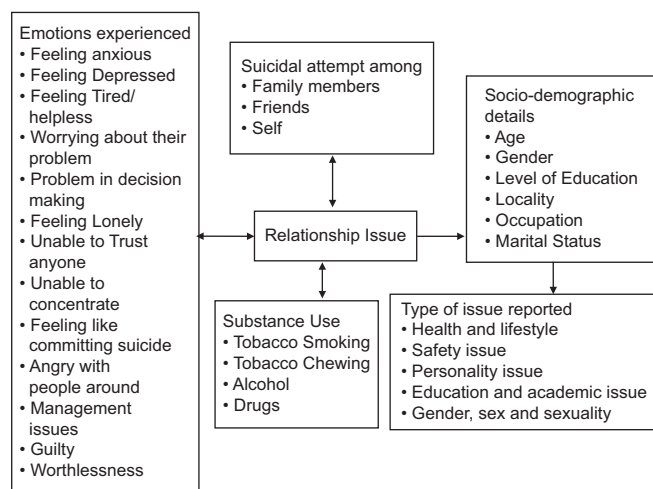
## Results

Almost two-third of the beneficiaries were aged 15–20 years (62.31%) and from rural areas (69.04%). Majority of the beneficiaries were unmarried females and students and completed more than 10 years of schooling. Most beneficiaries who had relationship issues were aged between 15 and 20 years, males, students, unmarried and were from rural areas [Table 1].

All the 18 variables on emotions experienced by the beneficiaries were found to be significantly ( $<0.001$ ) associated with relationship issues [Table 2].

Majority of the beneficiaries who reported relationship issues reported issue with their parents (21%) and issue with marital/romantic (30.5%) relationship (data not shown). This was followed by issues with virtual relationships (13.6%) and peer relationships (13.4%).

More than 70% of the beneficiaries who had safety (72.48%) or gender, sex, and sexuality issues (70.37%) reported having relationship issues [Table 3]. Half of the beneficiaries who reported having attempted a suicide (51.05%) reported to



**Figure 2:** Conceptual framework of hypothesized exposure variables affecting relationship issues among beneficiaries attending Yuva Spandana Kendras in Karnataka – 2017–2019

**Table 1: Sociodemographic characteristics and self-report of relationship issue among beneficiaries attending Yuva Spandana Kendras 2017-2019 in Karnataka (n=8595)**

Variables	Relationship issue		Total, n (%)	OR (CI)*	P (df) <sup>†</sup>
	Present, n (%)	Absent, n (%)			
Age in completed years					
15-20	642 (53.5)	4714 (63.8)	5356 (62.3)	Reference	
21-25	274 (22.8)	1629 (22.0)	1903 (22.1)	1.2 (1.1-1.4)	0.007
26-30	171 (14.2)	710 (9.6)	881 (10.3)	1.8 (1.5-2.1)	<0.001
31-35	114 (9.5)	341 (4.6)	455 (5.3)	2.5 (1.96-3.1)	<0.001
Gender					
Female	511 (42.5)	3326 (45.0)	3837 (44.6)	Reference	
Male	690 (57.5)	4068 (55.0)	4758 (55.4)	1.1 (0.98-1.3)	0.116
Locality					
Urban	323 (26.9)	2338 (31.6)	2661 (31.0)	Reference	
Rural	878 (73.1)	5056 (68.4)	5934 (69.0)	1.3 (1.1-1.4)	0.001
Years of schooling					
0-4	88 (7.3)	141 (1.9)	229 (2.7)	Reference	
5-7	76 (6.3)	314 (4.2)	390 (4.5)	0.4 (0.3-0.6)	<0.001
8-10	155 (12.9)	1220 (16.5)	1375 (16.0)	0.20 (0.2-0.3)	<0.001
>10	882 (73.4)	5719 (77.3)	6601 (76.8)	0.3 (0.2-0.3)	<0.001
Occupation					
Unemployed	169 (14.1)	1391 (18.8)	1560 (18.2)	Reference	
Students	772 (64.3)	5378 (72.7)	6150 (71.6)	1.2 (0.99-1.4)	0.064
Business/salaried	100 (8.3)	218 (2.9)	318 (3.7)	3.8 (2.8-5.0)	<0.001
Others	160 (13.3)	407 (5.5)	567 (6.6)	3.2 (2.5-4.1)	<0.001
Marital status					
Unmarried	980 (81.6)	6811 (92.1)	7791 (90.6)	Reference	
Married	211 (17.6)	555 (7.5)	766 (8.9)	2.6 (2.2-3.1)	<0.001
Others	10 (0.8)	28 (0.4)	38 (0.4)	2.5 (1.2-5.1)	0.014
Total	1201 (14.0)	7394 (86.0)	8595 (100.0)		

\*OR with 95% CI. <sup>†</sup>P value for Pearson Chi-square test for independence with appropriate df. OR=Odds ratio, CI=Confidence interval, DF=Degree of freedom

**Table 2: Distribution of emotions experienced and relationship issues among beneficiaries attending Yuva Spandana Kendra in Karnataka (n=8595)**

Variables	Relationship issues		Total (n=8595), n (%)	OR (CI)*
	Present, n (%)	Absent, n (%)		
Feel anxious	522 (27.4)	1384 (72.6)	1906 (22.2)	3.3 (2.9-3.8)
Feel depressed	230 (34.1)	444 (65.9)	674 (7.8)	3.7 (3.1-4.4)
Not interested to do any work	203 (29.2)	493 (70.8)	696 (8.1)	2.9 (2.4-3.4)
Feel tired or helpless	205 (27.2)	548 (72.8)	753 (8.8)	2.6 (2.2-3.1)
Worrying about problems	189 (26.6)	522 (73.4)	711 (8.3)	2.5 (2.1-2.9)
Feel like lost everything in life due to their problems	139 (34.6)	263 (65.4)	402 (4.7)	3.6 (2.9-4.4)
Feel incapable of making decisions or solve problems	226 (30.0)	528 (70.0)	754 (8.8)	3.0 (2.5-3.6)
Feel lonely	163 (28.3)	412 (71.7)	575 (6.7)	2.7 (2.2-3.2)
Unable to trust anyone	111 (40.7)	162 (59.3)	273 (3.2)	4.6 (3.5-5.8)
Forgetfulness	85 (27.3)	226 (72.7)	311 (3.6)	2.4 (1.9-3.1)
Difficulty in concentration	111 (37.0)	189 (63.0)	300 (3.5)	3.9 (3.1-5.0)
Feel like running away from everyone	83 (49.7)	84 (50.3)	167 (1.9)	6.5 (4.7-8.8)
Feel like committing suicide	79 (68.7)	36 (31.3)	115 (1.3)	14.4 (9.7-21.5)
Feel like it would have been good to have died	64 (56.1)	50 (43.9)	114 (1.3)	8.3 (5.7-12.0)
Angry with people around	129 (35.3)	236 (64.7)	365 (4.2)	3.7 (2.9-4.6)
Feel like failed in managing responsibilities	85 (33.0)	172 (67.0)	257 (3.0)	3.2 (2.5-4.2)
Feel guilty	124 (34.4)	236 (65.6)	360 (4.2)	3.5 (2.8-4.4)
Feel worthless	84 (24.1)	264 (75.9)	348 (4.0)	2.0 (1.6-4.2)

\*OR with 95% CI. All P values for Wald test are significant at P<0.001. OR=Odds ratio, CI=Confidence interval

have relationship issues. About three-fourths of the beneficiaries who consumed alcohol (77.02%) reported

having a relationship issue [Table 3]. All issues other than education and academic issues and consuming

**Table 3: Distribution of other risk factors of relationship issues among beneficiaries attending Yuva Spandana Kendras 2017-2019 in Karnataka (n=8595)**

Variables	Relationship issues		Total, n (%)	OR (CI)*	P (df) <sup>§</sup>
	Present, n (%)	Absent, n (%)			
Types of issues reported					
Health and lifestyle issues	858 (37.33)	1440 (62.66)	2298 (26.73)	10.34 (9.01-11.87)	<0.001
Personality issues	836 (30)	1944 (70)	2780 (32.34)	6.42 (5.62-7.34)	<0.001
Education and academic issues	907 (14.32)	5423 (85.67)	6330 (73.64)	1.12 (0.97-1.27)	0.112
Safety issues	548 (72.48)	208 (27.51)	756 (8.8)	28.99 (24.25-34.66)	<0.001
Gender, sex and sexuality issues	114 (70.37)	48 (29.62)	162 (1.88)	16.05 (11.39-22.62)	<0.001
Suicidal attempts among					
Family	97 (22.04)	343 (78)	440 (5.11)	1.81 (1.43-2.28)	<0.001
Friends	86 (18.37)	382 (81.62)	468 (5.44)	1.42 (1.11-1.80)	0.005
Self	97 (51.05)	93 (48.94)	190 (2.21)	6.90 (5.15-9.23)	<0.001
Substance use					
Tobacco chewing	48 (28.57)	120 (71.42)	168 (1.95)	2.52 (1.80-3.55)	<0.001
Tobacco smoking	50 (26.04)	142 (73.95)	192 (2.23)	2.22 (1.60-3.08)	<0.001
Drinking	305 (77.02)	91 (22.97)	396 (4.60)	27.32 (21.40-34.87)	<0.001
Drugs	1 (20)	4 (80)	5 (0.05)	1.54 (0.17-13.79)	0.70

\*OR with 95% CI, <sup>§</sup>P value for Pearson Chi-square test for independence with appropriate degree. OR=Odds ratio, CI=Confidence interval, DF=Degree of freedom

drugs were significantly (<0.001) associated with relationship issues.

Multivariable analysis [Table 4] revealed that being a student was associated with 1½ times increased risk of having relationship issues compared to unemployed beneficiaries attending Yuva Spandana Kendras (adjusted odds ratio [AOR]<sub>students</sub> = 1.49; 95% confidence interval [CI] = 1.18–1.89). Compared to unemployed beneficiaries, salaried individuals or those doing business had 3 times higher risk of having relationship issues (AOR<sub>salaried/business</sub> = 3.04; 95% CI = 2.10–4.40) and beneficiaries who were neither students nor salaried/business had 1.72 times higher risk of having relationship issues (OR<sub>others</sub> = 1.72; 95% CI = 1.22–2.44).

Beneficiaries who were married had a 42% higher risk of having relationship issues compared to unmarried beneficiaries (AOR<sub>others</sub> = 1.42; 95% CI = 1.06–1.90). Similarly, beneficiaries who were neither married nor unmarried had 3.4 times higher odds of having relationship issues (AOR<sub>others</sub> = 3.44; 95% CI = 1.45–8.15). The beneficiaries with health and lifestyle issues (AOR<sub>having health and lifestyle issue</sub> = 3.61; 95% CI = 3.05–4.27), personality issues (AOR<sub>having self-development issue</sub> = 2.88; 95% CI = 2.43–3.41), and gender, sex, and sexuality issues (AOR<sub>having gender, sex and sexuality issues</sub> = 3.10; 95% CI = 1.93–4.98) had almost 3 times higher risk of having relationship issues compared to those beneficiaries without these issues. Beneficiaries having safety issues had 6 times higher risk of having relationship issue (AOR<sub>having safety issues</sub> = 6.28; 95% CI = 5.01–7.87). Feeling anxious was associated with twice the higher odds of having relationship issues among beneficiaries attending Yuva Spandana Kendras (AOR<sub>feeling anxious</sub> = 2.09;

**Table 4: Multivariate logistic regression model for factors affecting relationship issues among beneficiaries attending Yuva Spandana Kendras in Karnataka 2017-2019 (n=8595)**

Variables	AOR (CI)*	P
Occupation		
Unemployed	Reference	
Students	1.49 (1.18-1.89)	0.001
Business/salaried	3.04 (2.10-4.40)	<0.001
Others	1.72 (1.22-2.44)	0.002
Marital status		
Unmarried	Reference	
Married	1.42 (1.06-1.90)	0.019
Others	3.44 (1.45-8.15)	0.005
Type of issue reported		
Health and lifestyle issues	3.61 (3.05-4.27)	<0.001
Personality issues	2.88 (2.43-3.41)	<0.001
Safety issues	6.28 (5.01-7.87)	<0.001
Gender, sex and sexuality issues	3.10 (1.93-4.98)	<0.001
Emotions experienced		
Feel anxious	2.09 (1.74-2.51)	<0.001
Unable to trust anyone	1.51 (1.05-2.18)	0.028
Forgetfulness	0.54 (0.36-0.79)	0.002
Feel like committing suicide	3.50 (1.98-6.18)	<0.001
Feel worthless	0.37 (0.26-0.53)	<0.001
Suicidality		
Member of family ever attempted suicide	1.42 (1.00-2.00)	0.049
Beneficiary ever attempted suicide	1.82 (1.17-2.85)	0.008
Substance use		
Alcohol	5.43 (3.92-7.41)	<0.001

\*95% CI, OR for each variable is adjusted for all other variables in the table. OR=Odds ratio, AOR=Adjusted OR, CI=Confidence interval

95% CI = 1.74–2.51). Beneficiaries who reported of being unable to trust anyone had 1.5 times higher odds of having relationship issues (AOR<sub>I feel like I am unable to trust anyone</sub> = 1.51; 95% CI = 1.05–2.18). The beneficiaries with

suicidal ideation had 3 times odds of having relationship issues ( $AOR_{\text{feeling to committing suicide}} = 3.50$ ; 95% CI = 1.98–6.18). Interestingly, the beneficiaries who reported having forgetfulness had a 46% reduced risk of having relationship issues ( $AOR_{\text{forgot things that just happened}} = 0.54$ ; 95% CI = 0.36–0.79). Similarly, beneficiaries who felt being worthless had a 63% reduced risk of having relationship issues ( $AOR_{\text{feeling worthless}} = 0.37$ ; 95% CI = 0.26–0.53). The beneficiaries who were aware of any family member attempting suicide were at 1.4 times increased risk of having relationship issues ( $AOR_{\text{family}} = 1.42$ ; 95% CI = 1.00–2.00), while beneficiaries who had ever attempted suicide had twice the higher risk of having relationship issues ( $AOR_{\text{self}} = 1.82$ ; 95% CI = 1.17–2.85) compared to those who had never attempted suicide. The beneficiary who had habit of drinking alcohol had 5 times higher odds of having relationship issues ( $AOR_{\text{drinking}} = 5.43$ ; 95% CI = 3.92–7.41) compared to beneficiaries who did not drink alcohol.

## Discussion

This study revealed occupation, marital status, having any health and lifestyle issue, personality issue, safety issue, gender, sex, and sexuality issue, suicidality, alcohol consumption, and different emotions experienced (feeling anxious, inability to trust anyone, forgetfulness, worthlessness, and suicidal ideations) as significant correlates for having relationship issues. All these factors were associated with increased risk of relationship issues. Forgetfulness and feeling worthless were associated with reduced risk of having relationship issues.

This is the first comprehensive study assessing risk factors for relationship issues in a state in India, utilizing data from a unique first-of-its-kind large-scale youth mental health promotion intervention. The results of this study are similar in terms of alcohol consumption and suicidality as risk factors for relationship issues.<sup>[13,14]</sup> Studies among adolescents and adults have revealed that depression, depression among family members, and anxiety are risk factors for relationship issues.<sup>[15]</sup> Similarly, feeling anxious and awareness of a member of family ever attempting suicide can be considered as precursors for anxiety and depression. Yuva Spandana being a mental health promotion program, data collected are more on potential risk factors (like feeling anxious) for mental health problems rather than diagnosing mental health problems (like generalized anxiety disorder).

On the contrary, three questions which are considered as core symptoms to diagnose depression, namely feel depressed, not interested in doing activities, feeling tired, or helplessness,<sup>[16]</sup> were not associated with risk of having relationship issues in multivariable analysis.

Interestingly, forgetfulness and worthlessness are found to prevent relationship issues in this study. It is hard to explain such an association considering the complexity of relationship issues among the young. Search words such as mental health and relationship, mental health problem and relationship, forgetfulness and relationship, forgetfulness and depression, forgetfulness and parental relationship, forgetfulness and suicide, worthlessness and relationship, worthlessness and depression, and worthlessness and parental relationship did not elicit any relevant literature supporting/refuting this observation. This complexity in association of different factors with relationship issues needs further evaluation.

Beneficiaries who reported having health and lifestyle issues, gender, sex and sexuality issues, safety and personality issues were significantly at higher risk of reporting relationship issues. It is likely that beneficiaries with safety issue tend to avoid interaction with people or they might lack trust among their relationship which might make them report relationship issues. Information on duration, intensity, and type of issues would throw more light on this complex association. In-depth interviews or other qualitative techniques and duration of emotional experiences would have added more information and understanding of factors affecting relationship issues.

The study is conducted among youth attending guidance centers within Karnataka. Study subjects are mostly rural, aged 15–20 years, students, and unmarried youth. This may be due to the fact that sensitization programs on Yuva Spandana are conducted mostly among students (78.1%) (data not shown). The results of the study can be fairly generalized to this group since three-fourths of the youth in Karnataka are studying in colleges.<sup>[17]</sup> Given the nature of potential exposures considered in this study, large sample size across the state of Karnataka, and lack of understanding of relationship issues in this population, the results of this study assume importance. The data utilized for the study are similar to clinic data or routine programmatic data. Under Yuva Spandana, data are collected on a standardized real-time digital platform by trained individuals (Yuva Samalochakas). The data are regularly monitored and checked for quality on a weekly basis. Thus, the quality of collected data can be considered reliable and valid. The large sample size of 8595 beneficiaries along with a model goodness of fit of 73% and area under curve of 86% is strength.

## Limitations and recommendation

Certain limitations of the study need specific mention. Firstly, the temporality of association between the assessed factors and relationship issues cannot be determined due to the cross-sectional nature of data

collected. Longitudinal assessment of these factors will throw more light on the temporality; follow-up data of some of these beneficiaries provides an opportunity for future analyses. Secondly, the beneficiaries attending Yuva Spandana Kendras are mobilized through sensitization programs conducted in the community. There is a possibility of healthy worker effect.<sup>[18,19]</sup> Youth who find themselves healthy are likely to attend Yuva Spandana Kendras, rather than those who do not consider themselves healthy. This is unlikely to change the results of the study. In fact, it is likely to strengthen the observed association when such effect is negated. Finally, there is a possibility of social desirability for responses to sensitive questions such as self-report of different issues, suicidality, and emotional experiences of beneficiaries. This is likely to be equal among both outcome groups. In this scenario of nondifferential misclassification, the observed odds ratios are likely to be stronger in nature compared to the ones obtained in the study.

Despite these limitations, interventions aimed at reducing the prevalence of these risk factors of mental illness are essential. This will likely reduce mental health problems in any community overtime. Thus, investing in mental health promotion interventions focusing on these precursors of mental illness among youth seems strategic.

## Conclusion

In an effort to understand factors affecting relationship issues among youth in Karnataka, this study throws light on important factors which increase or decrease the risk of having relationship issues. Relationship issues being important contributors towards mental health and related problems, findings of this study assume significant importance. This study reveals about 14 factors associated with relationship issue, which can, in turn, impact future overall and psychological well-being among youth in Karnataka. Our findings also have implications for other states in India as well as other low- and middle-income countries like India.

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## Conflicts of interest

There are no conflicts of interest.

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