



Received for publication: April 6, 2019
Accepted: July 22, 2019

Research article

Personality and phobias in adolescence: age and gender in psychopathological expressions

Salvatore Settineri¹, Emanuele Maria Merlo^{2,3*}, Angela Alibrandi⁴, Federica Sicari⁵, Irene Pagano Dritto⁵, Fiorella Strangis⁵, Fabio Frisone^{2,3}

¹University of Messina, Department of Biomedical and Dental Sciences and Morphofunctional Imaging, Italy

²University of Messina, Department of Cognitive Sciences, Psychology, Educational and Cultural Studies (COSPECS)

³CRISCAT (International Research Center for Theoretical and Applied Cognitive Sciences) University of Messina and University Consortium of Eastern Mediterranean, Noto (CUMO)

⁴University of Messina, Department of Economics, Unit of Statistical and Mathematical Sciences, Italy

⁵University of Messina, Psychological Doctor

Abstract

Background: Although the understanding of adolescent phobias is important, this phenomenon has thus far not been adequately researched. This report, based on clinical experience, highlights prevalent phobic phenomena linked to personality characteristics.

Methods: A sample of 241 adolescents from High School and the University of Messina, Italy was evaluated for phobic responses using the SAFA Scales. Personality types and aspects were assessed by the Myers-Briggs Type Indicator F Form.

Results: The results were consistent with the reported literature and revealed that psychopathological phenomena such as anxiety, obsession, eating disorders and phobias decreased with aging; however, depression remained constant over time. Significant differences emerged regarding gender, with the presence of higher scores on all scales except obsession for the female group. Personality analysis revealed aspects linked to the relations between psychopathological variables, introversion/ extraversion (such as polar dimensions), and rational/ irrational functions.

Conclusion: This research indicates that phobic phenomena may be underestimated in adolescents and links personality types and symptoms with phobic phenomena, indicating the potential need for interventions in adolescents.

Keywords

: adolescence, phobia, personality, psychological types, solitude

Highlights

- ✓ Age, gender and personality attitudes are relevant factors to consider in the expression of adolescent psychopathological phenomena.
- ✓ Higher presence of anxiety, eating disorders and phobias emerged in female individuals, decreasing with age.
- ✓ Phobic expressions could be underestimated in adolescent individuals, such as their relation with personality.

To cite this article: Settineri S, Merlo EM, Alibrandi A, Sicari F, Dritto IP, Strangis F, Frisone F. Personality and phobias in adolescence: age and gender in psychopathological expressions. *J Mind Med Sci.* 2019; 6(2): 304-310. DOI: 10.22543/7674.62.P304310

Introduction

Analysis of adolescent phobias is an important endeavor. Even though phobias are fairly common among adolescents, their prevalence may be underestimated, especially because a low number of individuals in this age group seek treatment (1). According to Grant (2), adolescence represents a period characterized by important physical, psychological, and relational transformations, determining a high vulnerability in terms of the occurrence of phobias. The majority of the phenomena manifested in childhood and pre-adolescence are characterized by a spontaneous remission as development progresses. In contrast, in the case of phobias, they may persist until full maturity if not properly treated.

Various studies have investigated gender and age differences in phobias, with several (3-6) demonstrating greater frequency of social phobias in females. Other studies (7, 8) have noted that different types of fears change during the development of the individual. Most frequent disorders during adolescence are in fact social phobias and generalized anxiety disorders, while specific phobias are prevalent mainly in adulthood.

In recent studies (9), the incidence of phobias worldwide has been estimated between 3% and 15% in the general population, together with the fear of heights and animals. Longitudinal follow up (10) has indicated that phobia onset in adolescence may predict a permanent effect manifested in adulthood, similar to other early predictive factors associated with parental neglect and economic adversity.

The aim of the current research was to highlight the presence of phobias in adolescence and to evaluate the characteristics of those phobias, including gender and age differences. Phobias and specific fears were studied in relation to personality predispositions.

Materials and Methods

Study population

The sampled consisted of 241 subjects, 182 (75.5%) females and 59 males (24.5%). The age of participants ranged from 14 to 24 years (Mean: 17.61, SD: 2.41).

Observation instruments

For evaluation of psychopathology and personality types, the following instruments were used.

1. The Myers-Briggs Type Indicator F Form (MBTI) (11, 12) assesses two attitudes (1): Extraversion, defined as the orientation of energy towards the outside, where the adaptation of the subjects is mediated by the resonance that

objects have for them (2); Introversion, defined by energy emanating from within the individual. The four functions of the Myers-Briggs include two perceiving functions: Sensation and Intuition, based on the subjective resonance that objects have for the individual. Specifically, adaptive processes of this type do not require large rational operations. The meaning and direction of the objects experienced remain of subjective and non-rational understanding. The other two are judging functions: Thinking and Feeling, with the rational functions based on processes of a logical order, adherent to reality, both external and internal to the subject. In particular, the core of these functions is represented by the norm, which is valuable for the subject or is perceived in an intersubjective sense.

2. Self-Administered Psychiatric Scales for Children and Adolescents (SAFA), (13) which has scales that assess anxiety; depression; eating disorders; somatic symptoms; and phobias.

Procedure

The method followed STROBE guidelines for observational studies. Statistical analysis was performed using SPSS 20.0. Numerical data were expressed as means and standard deviations and categorical variables as frequencies and percentages. Non-parametric analyses were used because variables were not normally distributed, as verified by the Kolmogorov Smirnov test. The Mann-Whitney test compared SAFA scales between middle adolescence and emerging adulthood, and between male and female participants. The Chi Square test was used to compare each phobia (presence and absence) between middle adolescence and emerging adulthood, and between male and female participants. The Spearman test determined the correlation between each phobia and personality variables (attitudes and functions). Finally, multivariate logistic regression models were estimated in order to assess the dependence of each phobia (presence or absence) on variables such as age, gender and personality variables. A P-value lower than 0.050 was considered to be statistically significant.

Results

24% of participants were male, 76% female. 48% were in middle adolescence, 52% were in emerging adulthood. Table 1 shows means and standard deviations for MBTI and SAFA items; Table 2 shows the number and percentage for fear/phobic categories.

Table 1. Descriptive statistics of numerical data

	Mean	Standard Deviation
Extraversion	10.99	6.12
Introversion	15.36	6.50
Sensation	15.47	5.60
Intuition	9.94	4.45
Thinking	14.12	6.49
Feeling	7.17	3.99
Anxiety	35.58	18.09
Depression	37.36	21.72
Obsession	28.15	15.28
Eating Disorders	18.92	10.10
Somatic Symptoms	16.05	8.37

Table 2. Number and percentage of categorical data

	Frequency	Percentage
Darkness	79	32.8%
Solitude	94	39%
Sleeping Alone	20	8.3%
Strangers	66	27.4%
Physical Defects	9	3.7%
Parental Punishment	19	7.9%
Others' Dominance	43	17.8%
Dogs	36	14.9%
Mice	72	29.9%
Insects	115	47.7%
Thunders	37	15.4%
Ghosts	51	21.2%
Monsters	28	11.6%
Devil	54	22.4%
Robbers	114	47.3%
Gypsies	58	24.1%
Drug Addict	68	28.2%
Needles	67	27.8%
Medical Examinations	29	12%
Bad Marks	73	30.3%
Scholar Examinations	47	19.5%
Public Speech	79	32.8%
Derision	107	44.4%
War	98	40.7%

Comparison between middle adolescence and emerging adulthood (Table 3) using the Mann-Whitney Test revealed significant differences on anxiety, obsession, eating disorders and phobias (Table 3A); Depression was not different across groups constant. Regarding specific phobias (Table 3B), significant differences emerged, i.e., the fear of ghosts, needles, medical examination and school-university examinations.

Table 3A. Comparison between middle adolescence and emerging adulthood for personality variables

Variables	Middle adolescence	Emerging adulthood	P-value
Anxiety	39.1±18.2	31.7±17.1	0.002
Depression	39.8±23.9	34.6±18.8	0.053
Obsession	30.5±14.8	25.5±15.3	0.014
Eating Disorders	20.3±9.4	17.4±10.6	0.009
Somatic Symptoms	17.9±8.8	13.9±7.3	<0.001

Table 3B. The comparison between middle adolescence and emerging adulthood for phobias

	Middle adolescence	Emerging adulthood	P-value
Darkness	35.2%	30.2	0.406
Solitude	40.0%	37.9%	0.742
Sleeping Alone	7.2%	9.5%	0.521
Strangers	31.2%	23.3%	0.168
Physical Defects	5.6%	1.7%	0.113
Parental Punishment	10.4%	5.2%	0.132
Others' Dominance	15.2%	20.7%	0.266
Dogs	16.0%	13.8%	0.631
Mice	34.4%	25%	0.111
Insects	52.8%	42.2%	0.101
Thunders	13.6%	17.2%	0.433
Ghosts	26.4%	15.5%	0.039
Monsters	12%	11.2%	0.848
Devil	24%	20.7%	0.538

Table 3B. The comparison between middle adolescence and emerging adulthood for phobias

	Middle adolescence	Emerging adulthood	P-value
Robbers	48%	46.6%	0.822
Gypsies	28%	19.8%	0.138
Drug Addict	28%	28.4%	0.938
Needles	40.8%	13.8%	<0.001
Medical Examinations	21.6%	1.7%	<0.001
Bad Marks	32%	28.4%	0.549
Scholar Examinations	27.2%	11.2%	0.002
Public Speech	35.2%	30.2%	0.406
Derision	46.4%	42.2%	0.516
War	38.4%	43.1%	0.458

Comparison between male and female participants (Table 4) using the Mann-Whitney Test revealed significant differences regarding all personality variables except obsession (Table 4A). Specific phobias that emerged as significantly different between males and females were darkness, solitude, mice, insects, ghosts, robbers, gypsies, medical examinations, public speech, and war; the scores were significantly higher in the female group (Table 4B).

Table 4A. The comparison between male and female subjects in terms of personality variables

Variables	Male	Female	P-value
Anxiety	27.7±17.4	38.1±17.6	<0.001
Depression	29.4±18.5	39.9±22.1	<0.001
Obsession	25.1±15.1	29.1±15.2	0.086
Eating Disorders	14.4±7.0	20.3±10.5	<0.001
Somatic Symptoms	11.0±7.3	17.6±8.0	<0.001

Finally, multivariate logistic regression models showed a significant dependence of the specific phobias, solitude, ghosts and public speech, on independent covariates such as age, gender and personality variables (Tables 5-7).

Table 4B. The comparison between male and female subjects in terms of phobias

	Middle adolescence	Emerging adulthood	P-value
Darkness	11.9%	39.6	<0.001
Solitude	22%	44.5%	0.002
Sleeping Alone	5.1%	9.3%	0.303
Strangers	18.6%	30.2%	0.083
Physical Defects	6.8%	2.7%	3.7%
Parental Punishment	5.1%	8.8%	0.359
Others' Dominance	18.6%	17.6%	0.853
Dogs	10.2%	16.5%	0.237
Mice	15.3%	34.6%	0.005
Insects	32.2%	52.7%	0.006
Thunders	1.7%	19.8%	0.001
Ghosts	8.5%	25.3%	0.006
Monsters	5.1%	13.7%	0.072
Devil	13.6%	25.3%	0.061
Robbers	33.9%	51.6%	0.018
Gypsies	13.6%	27.5%	0.030
Drug Addict	28.8%	28%	0.907
Needles	25.4%	28.6%	0.639
Medical Examinations	3.4%	14.8%	0.019
Bad Marks	22%	33%	0.112
Scholar Examinations	13.6%	21.4%	0.185
Public Speech	16.9%	37.9%	0.003
Derision	39%	46.2%	0.335
War	28.8%	44.5%	0.033

Table 5. A multivariate logistic regression model for the dependence of Solitude

Independent variables	OR	95% C.I.	p-value
Age	1.52	0.82-2.81	0.174
Gender	2.56	1.27-5.14	0.008
Extraversion	0.94	0.89-0.98	0.009
Introversion	0.91	0.82-1.02	0.122
Sensation	1.04	0.95-1.14	0.340
Intuition	1.05	0.94-1.18	0.330
Thinking	0.98	0.91-1.06	0.774
Feeling	1.08	1.01-1.16	0.028

Table 6. A multivariate logistic regression model for the dependence of Ghosts

Independent variables	OR	95%C.I.	p-value
Age	0.67	0.32-1.39	0.292
Gender	3.22	1.19-8.71	0.021
Extraversion	1.05	0.91-1.20	0.495
Introversion	1.04	0.91-1.19	0.494
Sensation	0.98	0.88-1.09	0.796
Intuition	0.99	0.87-1.12	0.904
Thought	1.12	1.02-1.23	0.013
Feeling	1.25	1.07-1.45	0.004

Table 7. A multivariate logistic regression model for the dependence of Public

Independent variables	OR	95%C.I.	p-value
Age	1.64	0.80-3.37	0.172
Gender	3.62	1.70-9.86	0.003
Extraversion	0.92	0.80-1.05	0.235
Introversion	1.19	0.99-1.27	0.001
Sensation	1.09	0.98-1.21	0.093
Intuition	1.08	0.95-1.23	0.225
Thought	0.97	0.88-1.06	0.517
Feeling	1.08	0.91-1.26	0.039

Discussions

Understanding adolescent phobias in adolescents is important (14), as well as identifying psychiatric comorbidities that can enable intervention at an early stage (15, 16). According to Ollendick et al. (17), research examining specific phobias among youngsters is limited. Our results indicate that symptomatology related to anxiety, obsession, eating disorders, and phobias tends to decrease with age and psychological development. Similarly, fear of ghosts, needles, medical examinations, and test taking decreases with development. This result, according to Costello et al. (18), could provide etiological data.

In line with other research (3, 5, 6, 19, 20), female adolescents exhibit more fear-related phenomena than males, and this is obvious in cognitive, environmental, biological, as well as temperamental stress and traumatic factors. Retrospective data reveal that gender-related

differences emerge in early life (21, 22) with invariant structures (23). Furthermore, as suggested through correlations and logistic regressions, fears are linked to various personality characteristics. A clear example is the fear of solitude, related to a personality type characterized by extraversion. Consistent with this perspective, fear of strangers and public expression are associated more with introversion.

Regarding meaning attributed by Jung to the function of “feeling” (24), it is conceivable that the reason why this function has strong relations with parental punishment, bad marks, and being laughed at is linked to morality. Similarly, the dependent relation is linked to inner objects and rational functions (thinking and feeling). In particular, the imaginary relations with the non-perceptible objects, such as ghosts, are significant for the study of inner representations related to absent objects and their outcomes on the body (25, 26). In the same way, fears linked to needles and medical examinations tend to decrease with age; this fact is a relevant starting point for the study of corporeality and the experience of the body (27-30) during this transition period.

Limitations of this study include the fact that high school students have different ways of approaching their fears (compared to university students), since the development of the symbolization process (31, 32) is not yet complete in these younger students. Moreover, had other several studies examined adolescent fears, it was not possible to compare our results directly to those of similar research, as reference to another theoretical interpretation (33) could lead to different conclusions. Nevertheless, linking personality characteristics with phobias will allow a better understanding of the complexity of changing adolescent personalities (34-36), highlighting the inner dynamics that a specific phobic object can represent in the life of a teenager.

Conclusions

This research encourages the symbolic observation of adolescent phenomena, pointing out not only the symptomatology, but also the psychological characteristics such as desire and the possibility to sublimate phenomena through a structuring force (37). The study of phobic images seems useful in building a bridge between emotions and the manifestation of symptoms, essential for the study of personality.

Conflict of interest disclosure

There are no known conflicts of interest in the publication of this article. The manuscript was read and approved by all authors.

Compliance with ethical standards

Any aspect of the work covered in this manuscript has been conducted with the ethical approval of all relevant bodies and that such approvals are acknowledged within the manuscript.

References

1. Benjet C, Borges G, Stein DJ, Méndez E, Medina-Mora ME. Epidemiology of fears and specific phobia in adolescence: results from the Mexican Adolescent Mental Health Survey. *J Clin Psychiatry*. 2012; 73(2): 152-158.
2. Grant DM. Anxiety in adolescence. In *Handbook of adolescent health psychology* (pp. 507-519). Springer 2013; New York, NY.
3. Burstein M, Georgiades K, He JP, Schmitz A, Feig E, Khazanov GK, Merikangas K. Specific phobia among US adolescents: phenomenology and typology. *Depress Anxiety*. 2012; 29(12): 1072-1082.
4. Crome E, Baillie A, Taylor A. Are male and female responses to social phobia diagnostic criteria comparable? *International Journal of Methods in Psychiatric Research*. 2012; 21(3): 222-231.
5. Herpertz-Dahlmann B, Bühren K, Remschmidt H. Growing up is hard: mental disorders in adolescence. *Deutsches Ärzteblatt International*. 2013; 110(25): 432-40.
6. Ranta K, La Greca AM, Kaltiala-Heino R, Marttunen M. Social phobia and educational and interpersonal impairments in adolescence: a prospective study. *Child Psychiatry & Human Development*. 2016; 47(4): 665-677.
7. Copeland WE, Adair CE, Smetanin P, Stiff D, Briante C, Colman I, Fergusson D, Horwood J, Poulton R, Costello EJ, Angold A. Diagnostic transitions from childhood to adolescence to early adulthood. *J Child Psychol Psychiatry*. 2013; 54(7): 791-799.
8. Tassin C, Reynaert C, Jacques D, Zdanowicz N. Anxiety disorders in adolescence. *Psychiatria Danubina* 2014; 26(1): 27-30.
9. Eaton WW, Bienvenu OJ, Miloyan B. Specific phobias. *The Lancet Psychiatry*. 2018; 5(8): 678-686.
10. Albor YC, Benjet C, Méndez E, Medina-Mora ME. Persistence of Specific Phobia from Adolescence to Early Adulthood: Longitudinal Follow-Up of the Mexican Adolescent Mental Health Survey. *J Clin Psychiatry*. 2017; 78(3): 340-346.
11. Myers IB. *The Myers-Briggs Type Indicator: Manual* (1962).
12. Settineri S, Frisone F, Alibrandi A, Pino G, Lupo NJ, Merlo EM. Psychological Types and Learning Styles. *Mediterranean Journal of Clinical Psychology* 2018; 6(3).
13. Franzoni E, Monti M, Pellicciari A, Muratore C, Verrotti A, Garone C, Cecconi I, Iero L, Gualandi S, Savarino F, Gualandi P. SAFA: A new measure to evaluate psychiatric symptoms detected in a sample of children and adolescents affected by eating disorders. Correlations with risk factors. *Neuropsychiatr Dis Treat*. 2009; 5: 207-14.
14. Kim SJ, Kim BN, Cho SC, Kim JW, Shin MS, Yoo HJ, Kim HW. The prevalence of specific phobia and associated co-morbid features in children and adolescents. *J Anxiety Disord*. 2010; 24(6): 629-634.
15. Nolen-Hoeksema S, Girgus JS. The emergence of gender differences in depression during adolescence. *Psychol Bull*. 1994; 115(3): 424-43.
16. Orgilés M, Méndez X, Espada JP, Carballo JL, Piqueras JA. Anxiety disorder symptoms in children and adolescents: differences by age and gender in a community sample. *Revista de Psiquiatría y Salud Mental (English Edition)*. 2012; 5(2): 115-120.
17. Ollendick TH, Raishevich N, Davis III TE, Sirbu C, Öst LG. Specific phobia in youth: phenomenology and psychological characteristics. *Behav Ther*. 2010; 41(1): 133-141.
18. Costello EJ, Copeland W, Angold A. Trends in psychopathology across the adolescent years: what changes when children become adolescents, and when adolescents become adults? *J Child Psychol Psychiatry* 2011; 52(10): 1015-1025.
19. McLean CP, Anderson ER. Brave men and timid women? A review of the gender differences in fear and anxiety. *Clin Psychol Rev*. 2009; 29(6): 496-505.
20. Tucker M, Bond NW. The roles of gender, sex role, and disgust in fear of animals. *Personality and Individual Differences* 1997; 22(1): 135-138.
21. Fredrikson M, Annas P, Fischer H, Wik G. Gender and age differences in the prevalence of specific fears and phobias. *Behav Res Ther*. 1996; 34(1): 33-39.
22. Lewinsohn PM, Gotlib IH, Lewinsohn M, Seeley JR, Allen NB. Gender differences in anxiety disorders and anxiety symptoms in adolescents. *J Abnorm Psychol*. 1998; 107(1): 109-17.

23. Muris P, Schmidt H, Merckelbach H. The structure of specific phobia symptoms among children and adolescents. *Behav Res Ther.* 1999; 37(9): 863-868.
24. Jung CG. *Tipi psicologici* (1921). Opere, Boringhieri, Torino 1969; 6: 463.
25. Settineri S, Frisone F, Alibrandi A, Merlo EM. Emotional suppression and oneiric expression in psychosomatic disorders: early manifestations in emerging adulthood and young patients. *Front Psychol.* 2019; 10: 1897.
26. Settineri S, Merlo EM, Turiaco F, Mento C. Les organes endommagés dans la constitution de l’image de l’esprit. *L’Évolution Psychiatrique.* 2018; 83(2): 333-342.
27. Furnham A, Badmin N, Sneade I. Body image dissatisfaction: Gender differences in eating attitudes, self-esteem, and reasons for exercise. *Journal Psychol.* 2002; 136(6): 581-596.
28. Merlo EM, Frisone F, Settineri S, Mento C. Depression signs, Teasing and Low Self-esteem in Female Obese Adolescents: a clinical evaluation. *Mediterranean Journal of Clinical Psychology* 2018; 6(1).
29. Motofei IG, Rowland DL. Structural dichotomy of the mind; the role of sexual neuromodulators. *Journal of Mind and Medical Sciences* 2016; 3(2): 131-140.
30. Motofei IG, Rowland DL. The mind-body problem; three equations and one solution represented by immaterial-material data. *Journal of Mind and Medical Sciences* 2018; 5(1): 59-69.
31. Settineri S, Merlo EM, Turiaco F, Mento C. The symbol theory in S. Freud, CG Jung and CS Peirce. *Mediterranean Journal of Clinical Psychology* 2017; 5(2).
32. Settineri S, Sicari F, Dritto IP, Frisone F, Mobilia FS, Merlo EM. Application of art therapy in adolescence: photo-novel analysis as an expressive technique. *Mediterranean Journal of Clinical Psychology* 2019; 7(2).
33. Eysenck HJ, Eysenck MW. *Personality and individual differences.* New York, NY: Plenum, 1987.
34. Frisone F. Mask as an epiphenomenon of the complex in psychotherapy. *Mediterranean Journal of Clinical Psychology* 2019; 7(1).
35. Merlo EM. Adolescent phobia as a “mask object”. *Mediterranean Journal of Clinical Psychology* 2019; 7(1).
36. Settineri S, Frisone F, Merlo EM. The Mask object in psychotherapy: Presentation and Representation. *Mediterranean Journal of Clinical Psychology* 2019; 7(1).
37. Riccio G, Hernandez AE, Perrella R. Resilience: a structuring force. *Mediterranean Journal of Clinical Psychology* 2018; 6(3).