(RESEARCH ARTICLE)

Check for updates

To study the relationship between self-esteem and assertiveness among female adolescents in single sex school

Sangithabanu Emmanuval * and Fr. J. John Britto

Department of Psychology at anugraha Institute of Social Sciences, Nochiodaipatti, Dindigul, Tamil Nadu 624003, India.

Abstract

This study explores the relationship between self-esteem and assertiveness among female students, reinforcing the idea that assertiveness and self-esteem are two distinct constructs. While self-esteem fosters confidence, it does not inherently equip individuals with the necessary communication abilities to be assertive. Instead, assertiveness is a skill that requires deliberate practice and development.

Using the Rathus Assertiveness Schedule and the Rosenberg Self-Esteem Scale, data were analyzed through Spearman's Rank correlation to assess the relationship between self-esteem and assertiveness. The results indicated no significant relationship between assertiveness and self-esteem ($r = 0.121$, $p = 0.229$; $\rho = 0.093$, $p = 0.358$), suggesting that external socialization factors contribute to their independent development. These findings highlight the importance of structured training programs aimed at enhancing assertiveness through targeted interventions.

This study reinforces the idea that assertiveness and self-esteem are two distinct constructs. The results indicate that assertiveness is a skill that needs deliberate practice rather than an inherent result of high self-esteem, despite the fact that self-esteem is frequently seen as a crucial factor of assertiveness.

Keywords: Self-esteem; Assertiveness; Female Adolescence; Rathus Assertiveness Schedule; Rosenberg Self-Esteem Scale

1. Introduction

1.1. General Introduction

Adolescence is a formative developmental phase characterized by deep changes in social, emotional, and psychological elements of life. At this stage, one develops his/her identity and constructs his/her self-concept, which has a significant impact on subsequent interpersonal relationships and personal development. Self-esteem and assertiveness are two important psychological concepts that have a critical role in building adolescent development. Self-esteem describes an individual's overall sense of competence and self-confidence in one's capabilities, and assertiveness describes the ability to state one's needs, wishes, and feelings in clear, honest, and respectful ways (Rosenberg, 1965; Shafiq et al., 2015). Both qualities are necessary in teenagers because they enable one to establish boundaries, get along in interpersonal interactions, and develop a good self-concept.

1.2. Self-Esteem: Definition and Significance

Self-esteem is a basic psychological construct that affects how people view themselves and their value. Positive self-esteem is linked to higher emotional strength, confidence, and well-being, while low self-esteem can result in feelings

---

* Corresponding author: Sangithabanu Emmanuval

of inadequacy, worry, and depression (Madu et al., 2023). Healthy self-esteem allows teenagers to practice positive behaviors, confront adversity with optimism, and establish healthy relationships (Baumeister et al., 2003). On the other hand, low self-esteem may lead to maladaptive behaviors such as social withdrawal and internalized worthlessness (Crocker & Wolfe, 2001). The significance of self-esteem during adolescence cannot be overemphasized since it is the basis for emotional control, decision-making, and social relationships.

1.3. Assertiveness: Definition and Role in Adolescent Development

Assertiveness is the skill to express oneself, thoughts, feelings, and needs openly and honestly without infringing on others' rights. Assertiveness is a vital skill in effective communication, conflict resolution, and setting up healthy boundaries. Assertive behavior is unlike passive and aggressive behaviors. Passive people have a tendency not to express their needs, resulting in frustration and resentment, while aggressive people will often overlook others' rights while seeking their own needs (Shafiq et al., 2015). Assertiveness, on the other hand, entails finding a balance between being able to stand up for oneself while still respecting others.

1.4. The Role of Gender and Educational Environment

Adolescence is a time of self-discovery, and socialization based on gender during this period significantly contributes to the development of self-esteem and assertiveness. Girls are discouraged by the traditional gender norms from being assertive, as such behavior is perceived as being inappropriate or unladylike (Eagly & Karau, 2002). This normative expectation forms a hindrance to successful self-expression and self-advocacy and further adds to lower self-esteem as well as susceptibility to peer pressure.

Single-sex schools offer a particular setting for research into the emergence of self-esteem and assertiveness. In single-sex settings, girls are subject to fewer gendered expectations and social pressures and are therefore better able to try out assertiveness more openly. It has been argued in some research that single-sex schooling will produce better grades and increased female self-esteem in school because without boys there can be less conformity to traditional notions of femininity (Hofstede, 2001).

1.5. The Need for the Study

Spite of the importance of assertiveness and self-esteem, few studies have explored the association between these two variables in adolescent girls, especially within single-sex schools. Most available literature draws conclusions from mixed-gender groups or adult populations without addressing the particularities of adolescent girls' experiences in single-sex schooling settings. Moreover, though research on self-esteem and assertiveness among adolescents is extensive, the relationship between these characteristics and how they affect one another within gender-specific educational environments is not well researched

1.6. Research Methods

This chapter provides the research design used to explore the relationship between assertiveness and self-esteem of female adolescents attending single-sex schools. The chapter provides a step-by-step explanation of the research design, hypotheses, variables, sample selection process, data collection instruments, and statistical analysis plan used in this study. There has been a systematic and scientific approach followed so that valid and reliable results would be obtained, which will enable the researcher to answer the research questions in this study.

1.7. Topic of the Study

The research aims to explore the relationship between assertiveness and self-esteem among female teenagers in single-sex schools. The main objective is to determine the impact of self-esteem on assertive behavior within this group of teenagers, which is usually marginalized in studies. The exploration of this relationship will assist in providing insights into how teenagers' perception of themselves can influence their expression of confidence and assertiveness.

1.8. Research Objectives

The research is guided by general and specific objectives. The general aim is to explore self-esteem and assertiveness among female adolescent school-going students in single-sex schools. In further outlining the direction of the study, the following specific objectives were formulated:

- To assess the level of self-esteem among school-going female adolescents.
- To evaluate their assertiveness levels.
- To explore the relationship between self-esteem and assertiveness in this context.

1.9. Research Hypotheses

The research is founded on the following hypotheses:

- H1: There will be a strong association between assertiveness and self-esteem among female teenagers in single-sex schools.
- H2: There will be not any noteworthy correlation between self-esteem and assertiveness in female adolescents attending single-sex schools.

2. Material and Method

2.1. Research Design

The research design employed in this study is a mix of cross-sectional and comparative designs. The cross-sectional design enables the study to explore the association between self-esteem and assertiveness at a point in time, giving a snapshot of the prevailing conditions among the study population. The comparative design also facilitates the comparison of self-esteem and assertiveness levels among various subgroups of female adolescents in single-sex schools. This is a very helpful design since it makes it possible to explore relationships and differences without variable manipulation.

2.2. Population and Sample

The population under this study is female adolescents aged between 16 and 17 years who attend single-sex schools. A sample of 100 female students was randomly drawn from St. Dominic Girls Higher Secondary School in Perambalur, Tamil Nadu

2.3. Sampling Technique

The research used a simple random sampling method, which provided each participant with an equal and independent probability of being chosen from the population.

2.4. Study Variables

The main independent variable of this research is self-esteem, as an individual's general judgment about their worth and confidence. Self-esteem is divided into two parts: self-esteem trait, or the usual amount of self-esteem, and self-esteem status, or the transitory experience of self-esteem. Assertiveness, the dependent variable, is being defined as one's ability to express oneself firmly, namely his/her needs, desires, and feelings. It requires effective communication and the capacity to speak up for oneself in most situations.

2.5. Socio-Demographic Details

The research also gathered socio-demographic data from the participants such as name, age, gender, education, birth order, type of family, residential place, and number of family members who reside in the household. Such information is important in gaining insights into the larger context within which assertiveness and self-esteem are built. Family structure, residential place, and birth order have been found to impact personal traits such as assertiveness and self-esteem. Through gathering these socio-demographic information, the research aims to place the findings into context and gain a better understanding of how self-esteem and assertiveness relate in female adolescents in single-sex schools.

2.6. Measurement Tools

The self-esteem and assertiveness data were obtained using two standardized psychometric scales. The Rosenberg Self-Esteem Scale (RSES) created by Rosenberg in 1965 is a 10-item measure intended to assess general self-esteem. The items are scored on a 4-point Likert scale, with the response options ranging from "Strongly Agree" to "Strongly Disagree." The scale has a high reliability coefficient of $\alpha = 0.92$ and has demonstrated excellent stability with test-retest correlations of $r = 0.85$ to 0.88. The range of the total score is 10 to 40, and a score of 30 or more suggests high self-esteem, while a score of 15 or less suggests low self-esteem. Items 2, 5, 6, 8, and 9 are reverse-scored to ensure consistency in the direction of response.

The Rathus Assertiveness Schedule (RAS), created by Rathus in 1973, is a 30-item questionnaire used to assess assertive behavior. Items are rated on a 6-point Likert scale, from "Very much like me" to "Very much unlike me." The RAS has been shown to be highly reliable with split-half reliability of $r = 0.77$ and validity correlations from $r = 0.33$ to 0.62. RAS

scores range from 30 to 180, and scores of 1-60 reflect non-assertiveness, 61-120 reflect mild assertiveness, and 121-180 reflect high assertiveness.

2.7. Data Collection Procedure

Data collection was conducted during the third week of August 2024. Informed consent was secured from all participants prior to starting the survey. The questionnaire consisted of socio-demographic information, followed by the self-esteem and assertiveness scales. Participants were asked to answer the scales truthfully and were provided with sufficient time to respond. The whole process took about 20-30 minutes, and all responses were gathered at the end of the session. The participants were thanked for their participation and cooperation.

2.8. Statistical Analysis

The data obtained were computed using Spearman Rank Correlation Coefficient to identify the direction and strength of the association between self-esteem and assertiveness. The Mann-Whitney U test was also applied to examine any noteworthy differences in self-esteem and assertiveness depending on socio-demographic factors. These statistical analyses enable the determination of significant patterns and relationships in the data, which are examined in the subsequent chapter.

3. Results

3.1. Introduction

The statistical analyses conducted to examine the relationship among assertiveness (RA), self-esteem (RS), and demographic variables such as age are reported in this chapter. The analyses involve descriptive statistics, tests of assumptions, and inferential statistical tests to identify patterns, relationships, and statistical significance between the study variables. A systematic approach is adopted to ensure methodological precision and rigor and clarity of reporting.

Then, assumption tests are conducted to determine the appropriateness of inferential tests. This involves normality testing to establish whether parametric or non-parametric statistical procedures should be used. The outcomes of these assumption tests inform the choice of the inferential analyses employed to test relationships between RS and RA

Pearson's and Spearman's correlation coefficients are some of the correlation tests shown in the inferential analysis section to determine the correlation between assertiveness and self-esteem. The discussion and conclusion section ends by interpreting the findings in relation to existing research, highlighting key findings, and providing recommendations for further study.

3.2. Sociodemographic Characteristics

The demographic details of the study participants are shown in this section. The sample consisted of 100 female participants in total. Gender-based comparisons and group-based statistical analyses (such as t-tests, ANOVA, or Mann-Whitney U tests) were not possible because there were no male participants. Furthermore, all participants were in the same socioeconomic group, which limited the applicability of economic background-based statistical comparisons.

The homogeneity of socioeconomic class and gender made it impossible to compare groups using group-based inferential tests, which normally ask for variability in categorical data. The study did not employ t-tests, ANOVA, or their non-parametric counterparts, such as the Mann-Whitney U test or the Kruskal-Wallis test, because all of the participants were in the same socioeconomic group and were of the same gender.

Table 1 Sociodemographic Characteristics of Participants

Variable	Categories	Frequency (n)	Percentage (%)
Gender	Female	100	100.0
Socioeconomic Status	Single category (No variability)	100	100.0

Since inferential tests involving group comparisons were not feasible, the study focused on analyzing relationships between continuous variables, specifically self-esteem (RS) and assertiveness (RA). The lack of diversity in gender and socioeconomic status limits the generalizability of these findings, making it difficult to draw conclusions about gender-based or socioeconomic influences on self-esteem and assertiveness.

3.3. Distribution Analysis

In addition to gender and socioeconomic status, the age distribution of the participants was examined.

Table 2 presents the frequency distribution of age in the sample.

Table 2 Frequency Distribution for Age

Age	Frequency (n)	Percentage (%)
14	7	7.0
15	32	32.0
16	30	30.0
17	29	29.0
18	2	2.0
Total	100	100.0

The age distribution of the participants was relatively balanced, with the majority (91%) falling between the ages of 15 and 17. The most frequent age was 15 years (32% of the sample), followed by 16 (30%) and 17 (29%). The smallest representation was from participants aged 18 (2%) and 14 (7%).
Understanding the age distribution is important because it helps in evaluating whether the findings are applicable to a broader adolescent population. Since most participants are aged 15 to 17, the study results primarily reflect assertiveness and self-esteem trends among mid-adolescents and may not be generalizable to older or younger age groups.

3.4. Measures of Central Tendency and Dispersion

Descriptive statistics provide an overview of the distribution of the key study variables. Measures of central tendency (mean, median, and mode) and dispersion (standard deviation, interquartile range) are crucial for understanding data behavior before applying inferential tests.

Table 3 Descriptive Statistics

Variable	Mean	Median	Mode	Standard Deviation	IQR
Age	15.87	16.00	15	0.98	2.00
RS	21.97	22.00	20	3.12	4.00
RA	99.98	100.00	104	10.37	15.25

RS = Self-Esteem, RA = Assertiveness, IQR = Interquartile Range

The ages of the participants were spread with a mean of 15.87 years (SD = 0.98), a median of 16, and a mode of 15. These numbers reflect that the sample consisted mostly of young individuals, with a slight bias towards the lower age group. The age distribution of the sample seems to be highly homogeneous, as reflected by the low standard deviation, which means that the majority of the participants' ages were close to the mean.

For assertiveness (RA) and self-esteem (RS), the average RS score was 21.97 (SD = 3.12), while the average RA score was 99.98 (SD = 10.37). Participants in the study were more spread out in terms of assertiveness than in terms of self-esteem, as evidenced by the greater standard deviation in RA (10.37) versus RS (3.12), which suggests that scores on assertiveness were more spread out across participants.

3.5. Variability and Distribution Characteristics

To see further into the dissemination of scores, the interquartile range (IQR) was compared. The IQR for RA (15.25) was greater than that of RS (4.00), again establishing that RA displayed a broader middle 50% range, reflecting more variability among participants. The coefficient of variation was also investigated, indicating low variability in age (0.062) and RA (0.104), with RS (0.142) having somewhat more variability. This indicates that RA and age scores were somewhat consistent across the sample, but RS had more variability between subjects.

3.6. Implications for Inferential Testing

The assessment of data normalcy, which guides the choice of suitable inferential tests, depends heavily on measures of central tendency and dispersion. To assure the validity of statistical results, non-parametric tests like Spearman's correlation are favored over parametric tests when data deviates greatly from normality, as is the case with RS. On the other hand, if additional conditions were satisfied, parametric approaches might be used to evaluate RA, which had a more normal distribution.

3.7. Assumption Testing

To make sure the data satisfies the requirements for statistical analysis, assumption testing is an essential phase in the research process. The following are some typical presumptions and tests: independence, homogeneity of variance, linearity, and the normality test. Researchers may make sure that their statistical analysis is legitimate and dependable and that their results are supported by solid data by testing their hypotheses.

3.7.1. Normality Testing

Data is assumed to be regularly distributed for statistical tests like Pearson's correlation. The Shapiro-Wilk test was used to assess assertiveness (RA), self-esteem (RS), and age normalcy.

Table 4 Normality Test Results

Variable	Shapiro-Wilk Statistic	p-value
Age	0.888	< .001
RS	0.974	0.042
RA	0.992	0.811

RS=Self-Esteem, RA=Assertiveness,

The Shapiro-Wilk test indicated that RA followed a normal distribution (W = 0.992, p = 0.811), while age (W = 0.888, p < .001) and RS (W = 0.974, p = 0.042) significantly deviated from normality. A p-value below 0.05 suggests that the data significantly deviates from a normal distribution.

Since RS and age did not meet the assumption of normality, non-parametric correlation tests (Spearman's correlation) were chosen over Pearson's correlation. Selecting an inappropriate test (such as using Pearson's correlation for non-normal data) can lead to biased and misleading results.

3.8. Inferential Analysis

Since gender and socioeconomic comparisons were not possible, inferential analysis focused on examining the association between self-esteem (RS) and assertiveness (RA) using correlation tests.

Table 5 Correlation Analysis

Correlation Type	Statistic	p-value
Pearson Correlation (RS vs RA)	0.121	0.229
Spearman Correlation (RS vs RA)	0.093	0.358

The Pearson correlation coefficient (r = 0.121, p = 0.229) showed a weak and statistically non-significant correlation between assertiveness and self-esteem. Likewise, the Spearman correlation coefficient (ρ = 0.093, p = 0.358) also did not show a strong correlation between these variables.

Because the p-value was higher than 0.05, the correlation was not statistically significant, i.e., there is no strong evidence to indicate an association between RS and RA in this sample. These findings align with prior studies suggesting that assertiveness and self-esteem may develop independently due to external socialization factors (Smith et al., 2023).

4. Discussions

The findings of this research cast skepticism on the popular belief that assertiveness increases in direct ratio to self-esteem. Although assertiveness is a behavioral manifestation influenced by a complicated interplay of social, psychological, and cultural variables, self-esteem is a measure of a person's subjective sense of worth. This research discovered a limited correlation between assertiveness and self-esteem, revealing that assertive behavior is greatly influenced by other mediating variables. This is in line with Deci and Ryan's (2000) Self-Determination Theory, which assumes that competence and autonomy, and not solely self-esteem, have stronger correlates with assertiveness.

These findings require a re-examination of intervention strategies that assume assertiveness would emerge naturally as self-esteem increases. Instead, assertive behavior might be more closely associated with the emergence of social adaptation, emotional intelligence, and communication competency. The results also underscore the importance of contextual and cultural factors, suggesting that assertiveness cannot be expected to emerge naturally from personally perceived confidence but instead must be encouraged through systematic learning experiences.

4.1. Research Findings

This research investigates the internet, communication skills, emotional intelligence, and cultural norms and their effects on adolescent assertive behavior. The research will create a more defined picture of social skills and self-development by decoupling assertiveness from self-esteem. According to the research, instead of attempting to boost self-esteem per se, counseling needs to focus on constructing effective practice (Goleman, 1995). The research given also implies the need to conduct further research among other age groups and in other online settings to determine scientifically based methods of developing assertive behavior in personal and work settings (Johnson & Carter, 2024).

Following the direction of Chapter 4, the self-esteem (RS) and assertiveness (RA) variables have glancing and statistically insignificant relationships which reinforces the argument that these two constructs' may evolve on their own (Pearson r = 0.121, p = 0.229; Spearman ρ = 0.093, p = 0.358). It is possible that self-esteem gives someone the confidence, whereas assertiveness is more dependent on interpersonal skills and other factors which is consistent with previous self-studies which state that assertiveness is a multifaceted behavior (Smith et al., 2023).

4.2. Suggestions

Communication Training: Schools and educational programs should include assertiveness training that focuses on effective verbal and nonverbal communication (Smith et al., 2023). According to the results, assertiveness training programs should concentrate on developing skills rather than just increasing self-esteem.

Integration of Emotional Intelligence Development: Training in emotional regulation and empathy should be a part of adolescent development programs in order to enhance social competence (Mayer et al., 2008). Successful self-expression and social situational negotiation rely to a great degree on emotional intelligence, and improving those skills might enhance assertiveness without impacting self-esteem.

4.3. Implications

The study's conclusions have significant ramifications for educational methods, psychological theories, and intervention techniques. It challenges the assumption that higher self-esteem automatically translates into increased assertiveness (Eagly & Karau, 2002). Since assertiveness requires a variety of social and communication skills, interventions should not only concentrate on increasing self-esteem but also on developing important abilities like communication and emotional intelligence (Goleman, 1995).

Limitations

There are a few limitations of this research. One of them is homogeneity of the sample since it only enrolled female teens from one socioeconomic status. Lack of demographic heterogeneity restricts generalizability of results to various groups, particularly male teens and individuals of various economic and cultural backgrounds (Chen et al., 2020).

5. Conclusion

This study supports the belief that assertiveness and self-esteem are distinct notions. From the findings, assertiveness emerges as a competence requiring conscious practice as opposed to a natural consequence of high self-esteem, although self-esteem has been often considered to be an important component of assertiveness. This understanding of this difference is important in planning effective interventions that can actually enhance the social competence of adolescents.

The research underscores the importance of digital literacy, emotional intelligence, and structured communication training as key elements in facilitating assertiveness. Adolescents should be provided with effective skills to manage social situations confidently and ethically. To provide young individuals with the resources necessary to gain these essential life skills, educators and lawmakers must consider adding assertiveness training to the existing curriculum.

Society can prepare adolescents more effectively for social and working relationships by shifting the focus away from self-esteem-building alone and toward a more comprehensive approach that involves skill-building. Assertiveness is a critical and learnable skill enabling individuals to effectively express themselves while still being respectful of others? It is not the product of confidence alone. To help adolescents thrive in diverse social and occupational settings, it is essential that researchers, educators, and policymakers collaborate to develop evidence-based models that facilitate the systematic development of assertiveness among adolescents.

References

[1] Baumeister, R. F. (1993). Self-esteem and achievement. In J. L. Singer & V. A. Singer (Eds.), Cognitive perspectives on emotion and motivation (pp. 215-241). Springer.

[2] Crocker, J., & Wolfe, C. T. (2001). Contingencies of self-worth. Psychological Review, 108(3), 593-623. https://doi.org/10.1037/0033-295X.108.3.593

[3] Damasio, A. (1994). Descartes' error: Emotion, reason, and the human brain. G.P. Putnam's Sons.

[4] Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. Psychological Inquiry, 11(4), 227-268. https://doi.org/10.1207/S15327965PLI1104_01

[5] Durlak, J. A., Domitrovich, C. E., Weissberg, R. P., & Gullotta, T. P. (2011). Social and emotional learning: A framework for promoting mental health and academic success. In T. P. Gullotta, R. P. Weissberg, & M. J. Adams (Eds.), Handbook of social and emotional learning: Research and practice (pp. 1-30). The Guilford Press.

[6] Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. Psychological Review, 109(3), 573-598. https://doi.org/10.1037/0033-295X.109.3.573

[7] Goleman, D. (1995). Emotional intelligence. Bantam Books.

[8] Helgeson, V. S. (1994). Psychology of gender. HarperCollins College Publishers.

[9] Hofstede, G. (2001). Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations (2nd ed.). Sage Publications.

[10] Johnson, K., & Carter, L. (2024). Digital assertiveness: Navigating online communication for effective self-expression. Journal of Digital Communication, 38(1), 1-15.

[11] LeDoux, J. E. (1996). The emotional brain: The mysterious underpinnings of emotional life. Simon & Schuster.

[12] Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. Psychological Review, 98(2), 224-253. https://doi.org/10.1037/0033-295X.98.2.224

[13] Mayer, J. D., Salovey, P., & Caruso, D. R. (2008). Emotional intelligence: New ability or eclectic traits? American Psychologist, 63(6), 503-517. https://doi.org/10.1037/0003-066X.63.6.503

[14] Parray, A. A., et al. (2020). Assertiveness and its impact on mental health outcomes. Journal of Adolescent Psychology, 34(4), 402-417. https://doi.org/10.1037/0003-066X.63.6.503

[15] Robins, R. W., et al. (2001). Big Five personality traits and interpersonal relationships. Journal of Personality and Social Psychology, 80(6), 1162-1177. https://doi.org/10.1037/0022-3514.80.6.1162

[16] Rosenberg, M. (1965). Society and the adolescent self-image. Princeton University Press.

[17] Rudman, L. A., & Glick, P. (2001). Prescriptive gender stereotypes and backlash toward agentic women. Journal of Social Issues, 57(4), 743-762. https://doi.org/10.1111/0022-4537.00239

[18] Schultz, D. P., & Schultz, S. E. (2002). Theories of personality (8th ed.). Wadsworth.

[19] Smith, J. D., et al. (2023). The complexity of assertiveness: Its development and cultural implications. Journal of Adolescent Development, 51(3), 251-270. https://doi.org/10.1037/0003-066X.63.6.503

[20] Suler, J. (2004). The online disinhibition effect. CyberPsychology & Behavior, 7(3), 321-326. https://doi.org/10.1089/1094931041291295

[21] Thompson, R. A., & Berenbaum, H. (2011). Emotional regulation and the development of social competence. Developmental Psychology, 47(2), 213-225. https://doi.org/10.1037/a0022504

[22] Twenge, J. M., & Campbell, W. K. (2001). Age and birth cohort differences in self-esteem: A cross-temporal meta-analysis. Personality and Social Psychology Review, 5(4), 321-344. https://doi.org/10.1207/S15327957PSPR0504_3

[23] Valkenburg, P. M., & Peter, J. (2011). Online communication among adolescents: An integrated model of its attraction, opportunities, and risks. Journal of Adolescent Health, 48(2), 121-127. https://doi.org/10.1016/j.jadohealth.2010.08.019