



Some Personal Variables Associated with Speech Disorders among Elementary and Intermediate Students

Prepare

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Abstract:

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The current study aims at exploring (1) differences between primary and intermediate Saudi male students in speech disorders; (2) the relationship between speech disorders and parental styles, anxiety, speech phobia, and depression; (3) differences in the sample in these variables; and (4) the predictability of speech disorders by the former personal variables. The total number of study sample was 726; six-grade primary students (N = 354) and third-grade intermediate students (N = 372). For the end of achieving the study objectives, the study comprised the following tools: Anxiety Scale, Speech Phobia Scale (2018), Observation List, Beck Depression Scale (Arabic version by Ghareeb, 1988), and Parental Acceptance/Rejection Scale (Arabic version by Salamah, 1988). The findings indicated statistically significant correlations in the three types of speech disorders (sound production disorder, pronunciation disorders, and fluency disorders), individually and collectively, in favor of primary students. The F-value in parent rejection was 5.14, and in anxiety was 8.8 in favor of primary students. Additionally, no statistically significant correlations were found between parental acceptance, depression, and speech phobia. Moreover, a positive statistically significant correlation was found between the total score for speech disorders and both speech phobia and anxiety. No correlation, however, was found between speech disorders, on the one hand, and parental acceptance/rejection and depression, on the other. The results showed varying abilities to predict the variables of personality disorders when talking to the students in elementary and middle school.

Keywords: *speech disorders; parental styles (acceptance or rejection); speech phobia; anxiety-depression - depression primary and intermediate students—predictable.*

Introduction



Language has been the prime mean of communication employed in speaking, writing, listening, and reading. Language, as a term, is more comprehensive than speech. It has therefore attracted the attention of both linguists and psychologists. As a result, psycholinguistics emerged as an interdisciplinary field in applied linguistics. The inability to articulate, or even any imperfection in speech, is thus considered an impairment or a disability .

The core study of psycholinguistics is the relationship between the human psyche and language. It studies first and second language acquisition as a mental and psychological process and its relationship with thinking and personality. Moreover, it focuses on the psychological dimension of learning and the psychology of certain linguistic skills, like reading. Additionally, certain features of speech disorders are studied in psycholinguistics, like speech retardation, dyslexia, stuttering, and cluttering.

Review of Literature

Classification of Speech Disorders

Initially, three types of speech disorders can be recognized as related to pronunciation and oral performance as follows:

1. Articulation disorders: (omission, distortion, substitution, addition, and metathesis)
2. Voice disorders are related to the quality and quantity of voice production. (Inappropriate pitch, quality disorder, tone disorder, resonance disorder, dysprosody, dysprosodic disorder, echophrasia echolalia, hyperkinetic dysphonic, hoarseness voice, lamprophony, and quantitative distortion)
3. Fluency disorders: disorders in the features of normal speech that show fluency: sequence, duration, rate, and rhythm: (dysphasia, fluttering, pressure disorder, and stuttering)



It is likely that young children usually have speech disorders, but they gradually overcome them as they get older. However, some of these disorders exist and require psychological and medical treatment. Studies showed that the prevalence of these disorders varies from one case to another, as the number, gender, and age of the sample may vary, and the type of disorder may vary as well. One of the pioneering studies in the Arab countries is Fahmy's 1950, which manifested that 7% of the male members of the sample had articulation disorder, while only 4.6% of the female members had this disorder. As for speech disorder, the rate was only 2.5% for males and 5.3% for females. Moreover, Fahmy conducted another survey (1954–1956) and concluded that all types of speech disorders interpreted 33.2% of females and 28.75% of the male (Fahmi, 1985). (Al-Shakhs (1997) reached that 5.47% of females and 7.5% of males suffer from speech and articulation disorders. Månsson (2000) showed that 5.19% of the 3-5-year-old children on Bornholm Island in Denmark suffer from stuttering. He also showed that 71.4% of these children overcome this disorder once they reach the second grade of elementary school. Ryan (2001) found that 68.2% of those who suffer from stuttering needed no help to end this disorder. Language and oral performance tests illustrated no differences between those who previously had this problem and those who did not.

Recently, Zimmerman, Satterfield, Miller, Hossain, & McMahon (2007) found that 1,667 of children suffer from communication disorders. Out of every 1000 children at the age of eight, 63 suffer from these disorders, with the rate for girls and boys being 2:1. At least 3.7% of those children suffer from autism, and 4% suffer from attention deficiency, linguistic deficiency, and affective disorder.

For parental styles, they are usually defined as “those methods that one of the parents or both of them use in bringing up their children



and raising them in the light of their life experience and ideology so as to foster society's culture and values within them (Gaber & Al-Sheikh, 1987; Salamah, 1987; Ibrahim, 2008). Parental styles are classified into two types: the first type is the positive styles that indicate parental acceptance by supporting children and taking care of them either through words like praising and talking nicely to them and about them or through actions like kissing and playing with them. The second type is negative styles indicating parental rejection through aggressive actions and hatred, or at least indifference. Aggression and hatred are the result of resentment for the child. Indifference refers to a lack of concern for the child; there might be no harm afflicted on the child, but a neglect of their needs (Salamah, 1987: 8.)

A lot of the behaviors that indicate adjustment or maladjustment might be attributed to the quality of the human relationships that the individuals had in their families and the parental styles. Linguistic and pronunciation competence can be greatly be affected by parental styles. The quality and quantity of the interaction between parents and children accelerate the process of language acquisition and provide the proper context for the sound development of a child's speech. Stuttering, for example, has been attributed to an improper social milieu. This can happen in a family characterized by familial troubles, disputes between both parents or between them and the children, and overly punitive parental styles. Thus, all speech disorders that have no physical or functional origin may, along with other causes, be the result of bad parental styles and improper interactions between the parents and the children. Janjua, Woll, Woll and Kyle (2002: 196) arrived at a similar conclusion in discussing the effect of parental interaction on retarded speech.

More specifically, Jamieson (1995) reviewed the entire literature that addressed maternal strategies that mothers use in their interactions



with children. He concluded that a child's linguistic development depends greatly on the way he pays attention to certain issues. Their responses can also be directed so that their interactions and participation will increase gradually. The mother can be so kind and loving as she encourages her child. Although this applies more to the mothers of deaf children, it can also be true for normal children.

In the same vein, some personality traits like anxiety, depression, and social phobia can affect speech and result into speech disorders. This has been proven in many theoretical studies as well as some studies that tackled the relationship between personality traits and speech disorders. There is a clear connection between linguistic deficiency and speech disorders, on the one hand, and psychological equilibrium, on the other. This deficiency arouses anxiety and social phobia. As a result, the person usually avoids any social interaction that depends on verbal communication. In other cases, this may lead to low academic achievement (McInnes, Fung, Manassis, Fiksenbaum, & Tannock, 2004:309.)

Depression has become a common neurotic disorder. At least 10% of the adult males and 20% of the females suffer from depression. As for adolescents, 4.5–9.2% of females suffer from depression, compared to 2.3–3.2% of males. The general spread of this neurotic disorder measures 3–5%, and it is more common among women than men (Daniel, 2006: 47). Researchers usually classify depressed reactions according to their degree and duration. Thus, two types can be distinguished: the first type includes the simple-to-medium short-term reactions that usually take place after mishaps and critical situations, then the person overcomes them and becomes normal again (Kafafi, 1997: 446); the second type includes the chronic long-term reactions that require therapeutic intervention .

Other researchers classify depression according to the depressed person's awareness of his problem and his ability to adjust to the



external circumstances (the incidents) and internal circumstances (the effect of these incidents). Thus, there will be a type of depression that does not last for long until its causes are evaded or the person adjusts to the new situation. In the neurotic type, however, the cause is unknown and uncontrollable (Suleiman and Fawzi, 1999: 1054). A person's failure to achieve successful communication with the social milieu can lead to a chronic refrain from social interaction. There will be an ungrounded idea about other people's negative attitudes towards these disorders. Such a person is liable to prefer being alone and leading an isolated life, and finally, the vicious circle of depression.

Anxiety is a very common concept in psychotherapy, as it represents a common symptom in many neurotic disorders. The largest portion of the psychotherapists' clients suffer from anxiety or depression. Anxiety is considered in most character and psychotherapy theories to be a causal concept. It is an umbrella term that incorporates many anxiety disorders like panic, fear, after-shock pressures, overgeneralization anxiety, health-based anxiety, and taking drugs that have psychological effects. Studies have proved that the anxiety level differs from one country to another; they are higher, for example, in Egypt than in Saudi Arabia and Kuwait (Abbassi, 1999). The social and economic standard has its role as well, but it is not yet clear whether it is in the favor of the rich or the poor. The age factor can also be included; teenagers and newly-matured people are more anxious than the middle-aged and the old-aged (Abdel-Khaliq, 2000.)

According to the surveyed literature, the anxiety level will be higher in situations that require verbal communication. However, nobody has ever taken this anxiety as a factor in speech disorders, either in theory or in statistical research.



Speech phobia refers to some irrational fears that make the speaker unable to speak well because they cannot face their audience. A speaker should be self-confident enough to face the audience and impress them. Most people find themselves obliged to make public addresses in schools or after graduation. Some jobs require much public speaking; if the employee enjoys this ability, there is no problem, but if not, they will be in trouble. This feeling may paralyze action and communication. Some long-term withdrawals from work and study can be attributed to speech phobia .

Maher & Torosian (1999) found that people who suffer from stuttering are usually afraid to speak because they think that other people's negative attitudes toward their problem will degrade them. Tillfors, Furmark, Marteinsdottir, & Fredrikson (2002) proved that persons worry while they are waiting for a turn to deliver a public address lead to physiological and emotional reactions that can be indicated by brain scans (electroencephalography) and other analyses.

Cornwell, Johnson, Beardi, & Grillon (2006) reached that there is a reverse correlation between social anxiety and the quality of speech-making. The anxiety in this study was not the general type of anxiety, which did not prove to have such a correlation, but a feeling that accompanies social interactions. Real situations differ from virtual ones in arousing speech phobia and social phobia. Public addresses arouse fears that the speaker will be negatively received by the audience; especially if one of the audience members is influential in the life of the speaker. Such sudden feelings lead to anxiety and fears, which, in turn, may become a neurotic disorder sustained by other factors not yet decided by researchers. A forced public address will stimulate neuropsychological reactions that are more intense in people who have social phobia. The physical reactions that usually accompany public addresses range from a high heartbeat, galvanic



skin responses, and blood pressure disorders to sickness (nausea) and a great desire to leave the place.

Bögels & Mansell (2004) ascribed social phobia to a misunderstanding of the real causes of some problems, which leads to social anxiety. This will lead to negative social attitudes that appear as intense internal physiological indicators. This process usually includes the misinterpretation of ambiguous social incidents. Many studies have proved that such distortions and prejudices keep the symptoms of social phobia at high levels. Thus, any effort to lessen these distortions and prejudices helps greatly in treating social phobia. Interpreting facial expressions as seen by the speakers and the audience at social events has been the focus of many studies. Misinterpreting these expressions leads to an increased level of social phobia.

Conversely, Hofmann, Gerlach, & Roth (1997) attribute the anxiety speakers have while addressing an audience to an over concern with the consequences of this address and the possible negative reception of what they think to be their bad performance. Conversely, the cognitive models of social phobia hypothesize that the speakers may have negative mental representations of their social abilities. Rapee and Abbott (2007) find these representations not verifiable, as they are usually distorted by many internal and external factors and previous experiences. Such a situation lies ambiguously midway between speech phobia and social phobia.

In the light of the afore-mentioned review of literature, the researcher puts that there are no previous studies in Saudi Arabia tackled either the three types of speech disorders in primary and intermediate students nor ever tried to relate students' speech disorders to personal traits. In addition, the previous studies that approached speech disorders were mostly one-dimensional. Hence, the present study integrates three methods: cadastral, descriptive-comparative, and

predictive. Such integrated approaches are very promising for achieving integrated knowledge. Moreover, the study gives a special attention to parental styles and the role they play in speech disorders. The family is the main factor behind psychoneurosis and psychological wellbeing.

Study Objectives

The current study aims at

- Conducting a pioneering study, as far as I know, of the spread and characteristics of speech disorders among primary and intermediate students in Saudi Arabia, according to the factors mentioned above.
- Analyzing the differences among the different types of speech disorders and the different groups in some personal traits and identifying correlations between the types and the traits. These correlations will help diagnose speech disorders and the personal traits involved.
- Providing guidance to parents and educators in identifying these disorders in children and adolescents. This step will lead to counseling programs for these disorders, which inhibit communication with those groups.
- Testing out the possibility of predicting speech disorders in light of the variables discussed and deciding which factors are more indicative.
- Presenting some new scales for speech disorders and personality questionnaires prepared by the researcher to be used in Saudi Arabia for the first time. Future research by the researcher or by others can modify these

Study Hypotheses

The current study comprises four hypotheses as follows:

-There are no statistically significant differences between primary and intermediate students in all the types of speech disorders.

-There are statistically significant direct correlations between the total score of speech disorders on the one hand and speech phobia, parental styles, depression, and anxiety on the other of primary and intermediate students, males and females, collectively and individually.

-There are no statistically significant differences between primary and intermediate students in all the variables.

-The variables can be predictive of speech disorders in primary and intermediate students.

Study Sample

The study combines two samples:

The testing-out sample (normative sample): this sample was prepared for testing out the psychometric characteristics of the scales. It consisted of 100 sixth-grade primary students and 100 third-grade intermediate students from the same school. Some schools in Egypt host both primary and intermediate stages.

The main sample: the scores of this sample were used for testing out the hypotheses of the study and drawing out the conclusions. It consisted of 726 students: 354 sixth-grade primary students, 372 third-grade intermediate students from different schools in Tanta City. The six-grade primary student age factor ranged from 11.32 to 12.49, with a mean of 12.03 and a standard deviation of 1.89. As for the third-grade intermediate students, the age factor was between 15.00 and 16.44, with a mean of 15.88 and a standard deviation of 2.04.

Methodology:

1 .Scales



- Ibrahim's Speech Disorder Observation List (2018)
The researchers reviewed previous studies investigating the identification and treatment of speech disorders along with literature on language and linguistic skills and came up with three dimensions related to speech: sound production, word and sentence utterances, and fluency. The list included 30 items: 10 items for each dimension. The observers' task was to decide if each item was applicable to the observed student according to three options: always, sometimes, and rarely. Items with a positive direction were rated descendingly from 3 to 1, and those with a negative direction were rated ascendingly from 1 to 3. The highest score, 90, indicates high speech performance, and the lowest score, 30, indicates very low speech performance. Scores can also be grouped according to the dimensions.

The validity of the items was judged by eight referees from the psychology and education department and the curricula and methodology department at King Khalid University, Saudi Arabia. They all worked with students doing their practicum in primary schools (Appendix 1). The feedback helped in modifying some items and reformulating the items rated ascendingly from 1 to 3, in the negative direction, to be in the positive direction, rated descendingly from 3 to 1.

Seeking more validity, the list was applied to a group of six-grade primary students (N = 50) in two classes. Three observers (the researcher, the Arabic teacher, and the practicum supervisor) observed the students' speech performance, and each observer filled out a form individually. The correlation coefficient for the three observers was highly statistically significant (0.79–0.96). The list's internal consistency was validated by the correlation coefficients of the scores of the subdimensions compared to one another and to the total score. Table 1 shows the results:

Table 1 shows the correlation coefficients of the subdimensions of speech disorders compared to one another and to the total score.

A Table (1) the correlation coefficients of the sub dimensions of speech disorders compared to one another and to the total score

Correlations

	Sounds	Sentences	Fluency	Total
Sounds Pearson Correlation Sig. (1-tailed) N	1 726	.743** .000 726	.517** .000 726	.864** .000 726
Sentences Pearson Correlation Sig. (1-tailed) N	.743** .000 726	1 726	.554** .000 726	.887** .000 726
Fluency Pearson Correlation Sig. (1-tailed) N	.517** .000 726	.554** .000 726	1 726	.823** .000 726
Total Pearson Correlation Sig. (1-tailed) N	.864** .000 726	.887** .000 726	.823** .000 726	1 726

.**Correlation is significant at the 0.01 level (1-tailed).(Table (1) shows the high internal consistency of the list, as all the correlation coefficients are statistically significant at levels higher than 0.000. The validity was further tested by the exploratory factor analysis, the principle component analysis, and the variance. Three factors drive 83.68% of the total variance: the first factor is 60.4%, the second factor is 12.19%, and the third factor is 11.08%. Significant saturation, according to Gliford's criterion (± 0.3), was between 0.64 and 0.85. The first factor was proper sound production and pitch; the



second factor was appropriate tone; and the third factor was fluency and self-confidence. The reliability of the list was verified by Cronbach's alpha for the dimensions; the total score, which ranged between 0.67 and 0.79, indicated high reliability. The correlation coefficient in Guttman Split-Half was 0.74. The unequal-length dimension was 0.92 on the Spearman-Brown Formula.

2 .Children's and Adolescents' General Anxiety Characteristic Test, prepared by Ibrahim (2008.)

The 20-item test has four options for each item: always applicable, sometimes applicable, rarely applicable, and never applicable. The test can be used for both primary and intermediate students. The validity of the test was verified by a validity test of the correlation coefficient of the scores of its normative sample (N = 50) and Bibalawi's General Anxiety Test (1987), which was 0.79. The reliability was verified by the correlation coefficient of the two sections of the test (Split-Half); after applying the Spearman-Brown formula, the correlation was 0.83. The test was applied two times at three-week intervals; the correlation coefficient of the two scores was highly statistically significant at 0.79.

2 .Children's and Adolescents' Speech Phobia Test, prepared by Ibrahim (2018.)

All 20 items of the test are formulated in a positive direction, with four options for each item: always applicable, sometimes applicable, rarely applicable, and never applicable. The items address the emotional and physical symptoms that a person has when speaking in public, like annoyance and the desire to escape and avoid such situations. While the highest score ($4 \times 20 = 80$) indicates a high degree of speech phobia, the lowest score ($1 \times 20 = 20$) means the problem does not exist. The validity of the test was verified by five



staff members of the psychology and education department at King Khalid University, who agreed on 85% of the items, the other items were just modified, but no item was excluded. The internal consistency was validated by the correlation coefficient of each item with the total score. The correlation coefficient ranged from 0.67 to 0.88 (N = 200). The test was repeated after two weeks to verify its reliability. The correlation coefficient of the two scores was 0.89. The correlation coefficient of the two sections (odds and evens) was, after applying the Spearman-Brown formula, 0.85. Highly significant correlations at levels higher than 0.00.

4 .Children's Depression Inventory (CDI), prepared by Maria Kovacs.

The inventory was translated into Arabic by Ghareeb (colloquial Arabic version, 1988; modern-standard Arabic, 1993). Both versions were found to be equivalent, but the modern-standard Arabic version was used in the present study. The inventory has 27 self-reported items that identify symptoms of depression. The three options in each item can be graded from zero to two, and the total score can be from zero to 54. The validity of the inventory had already been verified widely in many studies in Egypt and the United Arab Emirates; it was correlative with other inventories for anxiety and depression (BDI). The inventory's reliability was verified more than once, either in Egypt or the United Arab Emirates, by various means: reapplication, internal consistency, and the alpha coefficient (Ghareeb, 1988: 16). The inventory proved high stability in all cases.

.°Parental Style Scale, prepared by Ronner

The scale was modified into Arabic by Salamah (1988). This self-reported scale produces a quantitative evaluation of the children's awareness of their parents', or any other guardians, acceptance or rejection. The 60 items are grouped under four dimensions: love

(apparent affection) (20 items), unspecified apparent rejection (10 items), aggression (apparent hatred) (15 items), and indifference (negligence) (15 items). Only the first group indicates acceptance, the others show parental rejection. The child has four options for each item: always, sometimes, rarely, and never. The positive or negative direction of the item has to be taken into account. The validity and reliability of the scale were verified in the United States. Salamah (1988), who issued the Arabic-modified version, verified its structural validity: the correlation coefficient of the internal consistency of the dimensions and the total score ranged from 0.46 to 0.78, a highly significant correlation (> 0.01). The factor analysis highlighted two main factors: apparent parental acceptance and parental affection and acceptance. The researcher in the present study measured the experimental validity by the correlation coefficient of the scores of a sample of six-grade primary students ($N = 100$) in the parental style scale for learning (Ibrahim, 2008) and the scores of this scale. The correlation coefficient was 0.77, a highly significant correlation (> 0.000). The reliability of the list was verified by Cronbach's alpha for the dimensions. The alpha coefficient showed a high stability rate ranged from 0.85 to 0.92. A reapplication with a three-week interval in the present study showed a 0.88 correlation coefficient in the six-grade sample ($N = 100$) between the two scores, a highly significant correlation (> 0.000).

Statistical analyses

The researcher utilized the following tools:

- One-way ANOVA
- Pearson Correlation
- Multiple Regression Analysis
- T-test for the mean differences of the unequal independent samples

Results and Discussion

- Descriptive statistics:

Means and variation coefficients of the variables discussed

Table (2.1): Means and variation coefficients of the variables discussed: the total scores of the sample (all stages, primary and intermediate)

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Speech Disorders	726	28.00	79.00	53.89	10.12	102.56
Acceptance	726	17.00	95.00	65.97	10.32	106.63
Rejection	726	59.00	168.00	104.82	21.50	462.35
Depression	726	27.00	63.00	39.51	7.60	57.83
Speech Phobia	726	20.00	70.00	43.27	9.81	96.26
Anxiety	726	22.00	79.00	44.71	10.17	103.580
Valid N (list wise)	726					

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Table (2.2): Descriptive statistics based on the stage: primary and intermediate

Descriptive Statistics

Stage	Speech Disorders	Acceptance	Rejection	Depression	Speech Phobia	Anxiety
1 Mean	56.02	66.25	106.67	39.8	43.87	45.85
N	354	354	354	354	354	354
Std. Deviation	9.00	10.15	21.42	8.79	10.19	10.02
Std. Error of Mean	.478	.53	1.13	.46	.54	.53
2 Mean	51.87	65.7	103.06	39.24	42.69	43.62
N	372	372	372	372	372	372
Std. Deviation	10.71	10.49	21.45	6.26	9.41	10.21
Std. Error of Mean	.55	.54	1.11	.32	.48	.52
Total Mean	53.89	65.97	104.82	39.51	43.27	44.71
N	726	726	726	726	726	726
Std. Deviation	10.12	10.32	21.5	7.6	9.81	10.17
Std. Error of Mean	.37	.38	.79	.28	.36	.372

The First Hypothesis: states that there are no statistically significant differences between primary and intermediate students in all the types of speech. A T-test for the mean differences of the unequal independent samples was used to verify this hypothesis. The results were as follows:

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Table (3) T-test for the differences between primary and intermediate students in speech disorders.

Group Statistics

	Stage	N	Mean	Std. Deviation	Std. Error Mean
Sentences	1	354	24.35	3.54	.18
	2	372	20.33	4.00	.2
Sounds	1	354	23.80	3.48	.18
	2	372	21.70	4.14	.21
Fluency	1	354	11.0	2.49	.13
	2	372	9.95	2.071	.1
Total	1	354	59.24	8.16	.43
	2	372	51.99	8.88	.46

Table (3) shows statistically significant differences between primary and intermediate students in sound disorders ($T = 7.31$), pronunciation disorders ($T = 14.31$), fluency disorders (11.48), and the total scores (10.93) in favor of primary students. Thus, the first hypothesis has been validated.

Results proved statistically significant differences between primary and intermediate students in speech disorders (sound, pronunciation, and fluency) and the total scores in favor of primary students. Thus, speech disorders diminish significantly as the students grow up and move from one stage to another. This confidence in communication abilities can be attributed to the increasing interpersonal experiences they have, the widening circle of social interaction and participation they get into, and the advanced educational levels they get to. Moreover, some speech disorders disappear as students grow up. Yairi, Noline, Paden, & Throneburg (1996) proved that 32% of the students with stuttering in primary schools overcame their disorder



quickly without any intervention; however, the study also showed that 34% could not.

Ryan's two-year-long study (2001) came to the same conclusion; it proved that 68.2% of pre-school children with stuttering improved without intervention. Al-Shakhs (1995) also validated this conclusion with the statistically significant inverse correlation he found between the age factor and speech orders in 4–12 students in favor of younger students. However, the relationship between age and study stage is not linear; it is not necessarily that speech disorders become less with the advance in age, a relapse can take place in early adolescence when children move to another school for the intermediate stage. Al-Shakhs (1997) proved this nonlinear relationship when he indicated a slight rise in speech disorders in the early years of the intermediate stage.

The Second Hypothesis states that there are statistically significant direct correlations between the total score of speech disorders on the one hand and speech phobia, parental styles, depression, and anxiety, on the other, of male's primary and intermediate students, collectively and individually. To verify this hypothesis, the linear correlation coefficients of the total score of speech disorders and the variables discussed in the primary student sample, the intermediate student sample, and the whole sample were measured. The results were as follows:

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Table (4) the correlation coefficients of the total score of speech disorders and the variables discussed.

Correlations

	Speech Disorders	Acceptance	Rejection	Depression	Speech Phobia	Anxiety
Pearson Correlation	1	.071*	-.042-	.101**	.258**	.264**
Speech Disorders Sig. (1-tailed)		.028	.131	.003	.000	.000
N	726	726	726	726	726	726
Pearson Correlation	.071*	1	-.586-**	-.160-**	-.059-	-.212-**
Acceptance Sig. (1-tailed)	.028		.000	.000	.055	.000
N	726	726	726	726	726	726
Pearson Correlation	-.042-	-.586-**	1	.161**	.262**	.319**
Rejection Sig. (1-tailed)	.131	.000		.000	.000	.000
N	726	726	726	726	726	726
Pearson Correlation	.101**	-.160-**	.161**	1	.298**	.367**
Depression Sig. (1-tailed)	.003	.000	.000		.000	.000
N	726	726	726	726	726	726
Pearson Correlation	.258**	-.059-	.262**	.298**	1	.496**
Speech Phobia Sig. (1-tailed)	.000	.055	.000	.000		.000
N	726	726	726	726	726	726
Pearson Correlation	.264**	-.212-**	.319**	.367**	.496**	1
Anxiety Sig. (1-tailed)	.000	.000	.000	.000	.000	
N	726	726	726	726	726	726

*Correlation is significant at the 0.05 level (1-tailed).

**Correlation is significant at the 0.01 level (1-tailed).

Table (4) manifests that neither parental acceptance or rejection nor depression has any statistically significant correlation, direct or



inverse, with speech disorders. However, there is a statistically significant direct correlation (> 0.000) between speech disorders and both anxiety and speech phobia. Thus, the second hypothesis proved invalid.

Results show statistically significant direct correlations between the total score of speech disorders and speech phobia ($R = 0.29$), anxiety ($R = 0.26$), and depression ($R = 0.1$), with highly significant correlations (> 0.000) ($N = 726$). This means that there is a relationship between speech disorders like sound, sentence, and fluency disorders and speech phobia. The speaker's fear and worry when dealing with others cause stuttering, dyslexia, and spastic dysarthria. As a result, the flow of the speech is interrupted, and the speaker cannot express themselves efficiently. General anxiety, upset, and restlessness make the problem worse. Goldman, Hargrave, Hillman, & Gress (1996) correlate speech-sound disorders with both general anxiety and stress. Hofmann et al. (1997) correlate fluency disorders with social phobia and speech phobia; both types of phobia cause sensitiveness during social interactions. Maher & Torosian (1999) correlate stuttering with anxiety and social phobia. However, Cornwell et al. (2006) did not find any correlation between speech quality and general anxiety, although it is correlated with social anxiety. Thus, social anxiety and speech phobia, both for physiological or psychological reasons, distort speech and indicate speech disorders.

The results showed no correlation between parental acceptance/rejection and speech disorders; the V-values were 0.07 and 0.04, respectively. A possible explanation can be found in the fact that the scale used focused only on the maternal style while the sample was all males in a male-oriented social milieu. It should also be noted that children at this stage—late childhood and early adulthood—are closer to the same-gender parent. The researcher,

therefore, recommends a reapplication of the scale either in two separate versions, fatherly and maternal, or a combined gender-free version.

The Third hypothesis states that there are no statistically significant differences between primary and intermediate students in all the variables discussed. A one-way ANOVA was used to verify this hypothesis. The results were as follows:

Table (5) One Way ANOVA of the variables discussed according to the stage: primary and intermediate.

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3126.418	1	3126.418	31.778	.000
Speech Disorders	71229.626	724	98.383		
Within Groups					
Total	74356.044	725			
Between Groups	54.912	1	54.912	.515	.473
Acceptance	77256.736	724	106.708		
Within Groups					
Total	77311.647	725			
Between Groups	2360.992	1	2360.992	5.136	.024
Rejection	332848.440	724	459.735		
Within Groups					
Total	335209.433	725			
Between Groups	56.949	1	56.949	.985	.321
Depression	41872.384	724	57.835		
Within Groups					
Total	41929.333	725			
Between Groups	253.490	1	253.490	2.639	.105
Speech Phobia	69537.596	724	96.046		
Within Groups					
Total	69791.085	725			
Between Groups	901.804	1	901.804	8.800	.003
Anxiety	74193.744	724	102.478		
Within Groups					
Total	75095.548	725			

Table (5) illustrates statistically significant correlations between the total scores of primary and intermediate male students in speech



disorders in favor of the primary students. Primary students, then, have more speech disorders than intermediate students. The table also shows statistically significant correlations between both groups in terms of anxiety in favor of the primary students. However, no statistically significant correlations were found for parental acceptance or rejection, depression, or speech phobia.

Results show statistically significant correlations between primary and intermediate students in speech disorders ($F = 31.78$), anxiety ($F = 8.18$), and parental styles ($F = 5.14$), in favor of the primary students. The results also show that some disorders gradually disappear as the students get older. Age in this stage indicates maturity, more education, more experiences, more interpersonal interaction, and exemplars to be imitated. It also indicates more cognitive development, a widening horizon of explanations, and fewer childish, irrational explanations. The differences between primary and intermediate students in the total score for speech disorders have already been discussed.

The anxiety level, according to some studies, is not the same in all life stages: the low level in childhood rises in adulthood and drops back again in middle age and old age (Abdel-Khaliq, 2000). Ghareeb (1993) came to the same conclusion, as he found a negative correlation between the age factor and anxiety: pre-university students had more anxiety than university students. As for maternal rejection, it was clear that as children grow up, their awareness of this rejection becomes less; they begin to understand that mothers deny them what they want for their own benefit. Parents should be friendly and patient with children in late childhood and adolescents; they should provide them with enough explanation of the parents' actions, especially when they are concerned.

Results show no statistically significant differences between primary and intermediate students in maternal acceptance, depression, or



speech phobia. Children in late childhood and adolescents, it seems, can realize parental rejection, but maternal acceptance and affection have no effect, as it is easy for the child to realize negligence and aggression and take no account of the affectionate attitudes. Offense sticks more to the mind than kindness. McNally, Otto, & Hornig (2001) show that bad situations can be more effective in arousing feelings like sadness, misery, worry, and agitation than neutral ones. Results show no statistically significant differences between primary and intermediate students in depression. This conclusion contradicts the conclusion in Osborne, Elsworth, & Hopper (2003), which indicated inverse correlations between age and depression: younger and less educated children are more likely to have depression. Other studies also came to contrary conclusions: Mirowski & Ross (1992) show that the depression rate differs according to age and education level; Stephen, Meenakshi, Friedmann, Einbinder, Katzen, Baker et al. (2004) showed that the rate was higher in the young. This contradiction might be explained by differences in the social and cultural setting of the present study. The sample in the present study also differs remarkably from the sample in the other studies. The sample in Osborne et al. (2003) consisted of women with cancer; in Stephen, Meenakshi, Friedmann, Einbinder, Katzen, Baker et al. (2004). It was a multi-ethnic heart disease in men and women. The contradiction, however, is acceptable because all the researchers agreed that low-level depression in early adolescence becomes higher later before it turns low again in adulthood and high again in old age (Mirowski & Ross 2002). This can also explain how the intermediate student sample in this study, early adolescents, showed no statistically significant differences with the primary student sample, who were close to adolescence. This is why Xinjun, Sundquist, and Sundquist (2008) call for more studies on the genetics of depression based on gender and age.

The Fourth hypothesis stipulates that the variables discussed can be predictive of speech disorders. Mullet multiple regression analysis in the stepwise formula was applied to verify this hypothesis. The results are as follows:

Results have proved that depression is the most predictive factor in speech disorders ($R = 0.26$). Anxiety and speech phobia have a joint multiple correlation ($R = 0.302$). Anxiety, speech phobia, and maternal rejection were significant ($R = 0.34$). The validity of this multiple correlation is confirmed by the F-values of these factors, 54.42, 36.29, and 31.11, respectively, a highly significant value (> 0.000). The beta-value is as follows: anxiety ($B1 = 0.220$), phobia ($B2 = 0.197$), and rejection ($B3 = 0.076$). The total value of B for all the factors is 43.538. The predictive formula, then, is:

Speech disorders (α) = 43.538 x B1 (0.220) + B2 (0.197) – B3 (0.076).

The results make it clear that anxiety, speech phobia, and parental rejection are highly reliable predictors of speech disorders. The relationship between anxiety, speech phobia, parental rejection, and speech disorders has already been discussed.

Speech disorders can result from social-related anxiety and reluctance to speak in public, complicated by an inner desire to perform well. There may also be some fear of showing weak points or facing negative evaluations. An awareness of parental rejection and false expectations of the outcomes of bad performance can also be added to the previous causes. The research could not find any previous studies that tried to predict speech disorders to hold comparisons. A need hence arises for more predictive studies about the personality factors discussed in this study or others involved in speech disorders.



Limitations

The scale used in measuring maternal styles (acceptance/rejection) did not prove reliable. A scale that takes the stage of the child and the relationship with the parents into account should be used.

The results of the study are specific to the sample used and its geographical limitations: the primary and intermediate male students in Tanta city, Egypt.

Future Directions

The researcher came up with some recommendations. To help students overcome speech disorders, more attention should be directed to parental styles, teaching methods, and teacher-student interaction; students should be freed from speech phobia and fear of negative evaluation. Some rhetorical education is essential for students to help them gradually become less sensitive and afraid of criticism when delivering addresses or speaking in public. The researcher also recommends conducting more studies on the gender differences related to the factors discussed in the present study. The researcher was not able to use a female sample as girls schools in Saudi Arabia are separated from the boys' even in administration. It is, therefore, very difficult for a male researcher to conduct a study on girls.

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