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PSYCHOSOCIAL PREDICTORS OF PARENTING STRESS: A CASE STUDY OF NURSING MOTHERS OF TWINS IN SOUTHWESTERN NIGERIA

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ABSTRACT

This study investigated the psychosocial predictors of parenting stress of nursing mothers of twins in South-Western Nigeria. A cross-sectional research design was adopted and data gathered from 276 mothers across 9 nursery schools in Lagos and Oyo state, Nigeria. Generated hypotheses were tested using appropriate inferential statistics. Findings revealed that collectively, perceived social support, work-related stress and personality traits (extroversion, agreeableness, openness to experience, conscientiousness and neuroticism) accounted for about 40% variance in parenting stress {R = .63; R2 = .40, F (7, 269) = 25.19; p<.05}; only perceived social support (β = .56; t = 10.71; p<.05) and conscientiousness (β = .22; t = 3.23; p<.05) independently predicted parenting stress. Also, age and number of children jointly accounted for about 15% variance in parenting stress {R = .39; R2 = .15, F (2, 274) = 8.17; p<.05}; only number of children (β = .20; t = 3.07; p<.05) independently predicted parenting stress. It was recommended from the findings that primary care hospital ensure to give proper orientation to both the husband and wife during prenatal and postnatal care, the essence of assisting the mother even after giving birth.

KEYWORDS: Parenting Stress, Perceived Social Support, Personality Traits, Nursing Mothers

INTRODUCTION

The possibility of conceiving twins is a complex trait in nature. It is plausibly affected by many genetic and environmental factors, depending on the type of twins. Generally, there are two types of twins namely monozygotic and dizygotic (Hoekstra, Zhao, Lambalk, Willemsen, Martin, Boomsma& Montgomery, 2008).

Monozygotic (MZ) twins, also referred to as identical twins, happen when a single egg cell is fertilized by a single sperm cell. The resulting zygote divides into two very early in growth, leading to the formation of two separate embryos. MZ twins usually happen in 3 to 4 per 1,000 births worldwide (Hoekstra et al., 2008). Research have suggested that most cases of MZ twinning are not solely caused by genetic factors, nonetheless, a few families with a larger-than-usual number of MZ twins have been reported, which indicates that genetics may play a vital role (Hoekstra et al., 2008). It is very not unlikely that genes involved in sticking cells together may in a greater way contribute

to MZ twinning, although this hypothesis has not been confirmed, which led the researcher to conclude that the cause of MZ twinning is unknown.

On another hand, dizygotic (DZ) twins, also called fraternal twins, occur when two egg cells are each fertilized by a different sperm cell in the same menstrual cycle. DZ twins are about twice as common as MZ twins, and they are much more likely to run in families than MZ. Compared with the general population, women with a mother or sister who have had DZ twins are about twice as likely to have DZ twins themselves (Machin, 2009).

Parenting (or child rearing in other terms), as a concept, primarily reveals the act of raising not only the children but also the responsibilities and activities involved. In general, it comprises promoting physical, emotional, social, financial and intellectual development of a child (Engur, 2017). Parenting a single child comes with series of responsibilities already, which sometimes could be stressful, talk less of nursing twins. Rationally, parenting two (2) children should double the roles expected to be played by the caregivers.

According to the general model of stress popularly proposed by Folkman, Lazarus, Dunkel-Schetter, DeLongis and Gruen (1986), stress occurs from the interaction between the environment and individual, when environmental stressors overwhelm the available resources. For over 40 years, a much effort has been made to unravel the extent to which stress correlates to parenting experiences, in a typical family with no twin. Most studies on parenting stress have resulted in an agreement that the core characteristic of parenting stress is the mismatch between the actual demands of the parenting role and the accessibility of resources for meeting the identified demands (Deater-Decard, 2004).

Succinctly, parenting stress can be defined as a set of process that lead to aversive psychological and physiological reactions arising from attempts to adapt to the demands of parenthood (Deater-Decard, 2004). This demand does not only comprise of parents meeting children's basic needs for survival but also trying to adapting to the child's special attributes, and at the same time striving to keep oneself well, and often times, make ends meet such as keeping a job (Adekunle and Adeyemo, 2013).

Even if it was important, parenting stress among nursing mothers with twins has not received much attention in Nigeria and in the world (Ribeiro et al., 2013). In the few published studies, the literature shows no consensus on the relation between psychosocial factors and parenting stress among mothers of twin. In this sense, this research aims to investigate personality traits, perceived social support and work-related stress as predictors of parenting stress of nursing mothers of twins in South-Western Nigeria. One of the many factors that could influence parenting stress is perceived social support.

Social support can be defined as the support which is taken from family, friends, neighbors and institutions which enhance the psychological dynamics, and help the individual in the aspects of affective, physical, cognitive contribution (Gulacti, 2010). In general, social support in the view of physical and psychological state, aid to the individual in a special situation, and also it provides basic social needs of the individuals such as love, loyalty, self-esteem and the sense of being a part of a group (Aksüllü, 2004, Tan and Karabulut, 2005).When perceived social support is thought as a

situation which influences the individual's feeling well, at the same time it may affect parenting either positively or negatively.

From literature, Pinelli (2000) found a positive correlation between social support and family adaptation to the stress of having a high-risk infant. In a sample of preterm infants and their families, Rowe and Jones (2010) found that partners (i.e., husbands or wives) were a significant source of support during care for the infant in a number of ways. In an investigation of mothers of full-term and preterm twins, maternal grandmother support predicted maternal marital adjustment and, when the infant's temperament was hard, predicted maternal mental health (Findler, Ben-Ari, & Jacob, 2007). Despite its relevance, however, family support appears to be most available almost immediately after the birth of a preterm or high-risk infant and decreases over the next few months (Rowe & Jones, 2010; Pinelli, 2000).

Accordingly and based on the Five-Factor Model (FFM or the Big Five), personality traits are hierarchically organized into five broad domains, consisting of extroversion, agreeableness, neuroticism, openness to experience and conscientiousness (Song & Shi, 2017). Extraversion, which represents the tendency to be sociable, assertive, expressive, and active; agreeableness, representing the tendency to be likable, nurturing, adaptable, and cooperative; conscientiousness, referring to the traits of achievement, organization, task-focus, and dependability; Neuroticism/emotional stability, which is the tendency to be secure, emotionally adjusted and calm; and openness to experience, which is the disposition to be imaginative, artistic, non-conforming, and autonomous (Markson, Krueger & Watson, 2006).

At the time of Belsky's (1984) writing, little empirical research had been done to examine links between personality and parenting, though in the time since, more and more work has been reported, linking personality directly to parenting. Two narrative reviews (Belsky&Barends, 2002; Belsky & Jaffee, 2006) summarized the available evidence. However, the present meta-analytic review on the nature and strength of empirical relations chronicled between each of the Big Five personality constructs and measures of parenting in the published research literature extends these narrative reviews in important ways. First, the narrative review is subjective and, thus, prone to bias and error. A common way to review a set of assembled studies is to count the number supporting various sides of an issue, ignoring sample size, effect size, and research design. This can lead to inconclusive findings.

Although research on the parents of children of various ages indicated that higher levels of Neuroticism are related to less active and involved parenting, as well as more negative, intrusive, and over-controlling parenting (e.g., Kochanska, Aksan, & Nichols, 2003; Smith et al., 2007), some studies fail to document significant relations between Neuroticism and parenting stress (e.g., Clarke, 2006). Similarly, several studies provide evidence that Extraversion is positively associated with responsive, sensitive, emotionally engaged, and stimulating parenting (e.g., Belsky, Crnic, & Woodworth, 1995; Levy-Shiff & Israelashvilli, 1988). However, other studies detect no relation between Extraversion and parenting (Clark, Kochanska, & Ready, 2000; Kochanska et al., 2004). Another factor that could influence parenting stress of nursing mother is work-related stress.

According to Rice (1998) there has been three definitions that have been used where stress is seen as

a physical force, subjective emotional tension and a bodily arousal. As a physical force, this is a physical force approach which suggests that an external event places severe pressure on an individual and all that the individual is left with is to try and survive. As a subjective emotional tension, it is a psychological approach which suggests that stress is an internal psychic struggle which an individual expresses as overwhelming and is perceived as threatening and harmful. As a bodily arousal, it is a physiological approach and it was suggested by Hans Selye (1947). Work-related stress, in particular, is the inability to cope with the pressures in a job, because of a poor fit between someone's abilities and conditions. It is a mental and physical condition which affects an individual's productivity, effectiveness, personal health and quality of work.

Females are increasingly entering the workforce to contribute their quota financially to family survival (Lim, 2009). It is a point to note that they are not only entering the work force in greater numbers but as well remaining in the work force throughout their child-bearing and child-rearing years as the case may be (Lim, 2009). Even with the changing societal trends and expectations, it is still 'expected' that working females should assume the traditional role of a homemaker, including taking care of the child (Nair, 2011). Following the emerging trends of women's involvement in work, it can be hypothesized that stress perceived from work could further increase stress in parenting.

It was based on the aforementioned that the following hypotheses were raised;

1. Personality traits, perceived social support and work-related stress will jointly and independently predict parenting stress of nursing mothers with twins in South-Western Nigeria.
2. Socio-demographics (age and number of children) will jointly and independently predict parenting stress of nursing mothers with twins in South-Western Nigeria.

2.0 METHODS

2.1 Design and Setting

The study adopted a cross sectional research design. The dependent variable in this study was parenting stress, and the independent variables were perceived social support, personality traits (extroversion, neuroticism, openness to experience, agreeableness and conscientiousness) and work related stress. The study was conducted in two (2) most populous and largest states in South-Western Nigeria, specifically, Oyo and Lagos state. This are two (2) notable places in Nigeria, housing the most commercial and industrial cities in Nigeria.

2.2 Participants and Sampling Technique

Participants consisted of nursing mothers with twins who reside in Lagos and Oyo state. Purposive sampling technique was utilized as mothers of twins were selected during post-natal clinics in the six (6) general hospitals across the two (2) states. The hospitals include the following; University College Hospital (UCH), Adeoyo General Hospital, Oluyoro General Hospital, Lagos University Teaching Hospital (LUTH), Isolo General Hospital and Lagos State University Teaching Hospital (LASUTH). Although 300 mothers were selected for this study, only 276 were retrieved.

2.3INSTRUMENTATION

Data were gathered through the means of a structured questionnaire. The questionnaire will be divided into five sections; Sections A, B, C, D and E.

SECTIONA: This section comprised of socio-demographic variables such as Age, marital status, religion, number of children, type of marriage, etc.

SECTION B: PARENTING STRESS

This is a 39-item scale developed by Johnson and Reader, (2002). The scale was developed to measure the extent to which parent feel stressed by taking care of the child. The scale has a 5-point Likert ranging as follows; SD- Strongly disagree; D – Disagree; U – Undecided; A – Agree; SA – Strongly agree. High score on the scale signifies high level of perceived parenting stress, while low score means low level of parenting stress. An example of the item is 'I find myself giving up more of my life to meet my children's needs than I ever expected'. The scale developers reported adequate internal consistency of α = .89. In this study, this scale reported a cronbach alpha of α = .78.

Section C: PERCEIVED SOCIAL SUPPORT SCALE

This section consisted of 12-item scale of perceived social support (MSPSS). The scale was jointly developed by Zimet, Dahlem, Zimet, and Farley, (1988). This scale was being adapted in this study to measure perceived social support. It is a 7 point rating scale, ranging from very strongly disagree "1", to 7 "very strongly agree". High score on the scale means high level of perceived social support, while low score signifies low perceived social support. An example of the item is 'There is a special person who is around when I am in need'. The scale developers conducted a two reliability tests; split-half coefficient part1 =.63 and part2 =.74; spearman-Brown coefficient =.74; and Guttman split-half coefficient =.69 and Cronbach's Alpha of .72. This scale yielded adequate internal consistency for this study (Cronbach alpha α = .83).

SECTION D: Personality Traits Scale

This comprised of a 44-Item Big-Five Inventory (BFI) was developed by John et al. (2008)for measuring Big-Five personality dimensions. The BFI includes the following; Conscientiousness (7-items), Neuroticism (7-items), Openness to experience (8-items), Extroversion (7-items) and agreeableness (7-items). It is a 5-point Likert response format, ranging from 1:'disagree strongly' up to 5:'agree strongly'. As a measure of the Big-Five dimensions of personality, the BFI has been validated against standard Big-Five instruments. The Test–retest reliability was therefore a more appropriate reliability measure for such brief scales. They were 0.77 for Extraversion, 0.71 for Agreeableness, 0.76 for Conscientiousness, 0.70 for Emotional Stability and 0.62 for Openness, indicating that the scale provides a stable measure of personality over time. The following internal consistencies were gotten for this study; extroversion (α = .71), neuroticism (α = .73), openness to experience (α = .80), agreeableness (α = .69) and conscientiousness (α = .59).

SECTION E: Work-related stress scale

This section consisted of a 13-item job stress scale developed by Stanton et al. (2001). Response

format ranged from 1- strongly disagree, 2- disagree, 3- undecided, 4- agree and 5- strongly agree. High score on this scale connotes constant stress in the workplace, while low score on the scale means low stress in the workplace. The scale developers reported the reliability coefficient of the scale (α= .89). This study found the scale to have adequate internal consistency generating a cronbach alpha of α = .81.

2.4 PROCEDURE

The research got an ethical approval from the Social Science Ethical Board to utilize the selected population for the study. The processing for the approval took a total of 5 weeks. After obtaining the ethical approval, the researchers proceeded to data gathering. All general hospitals in Lagos and Oyo state were visited for the purpose of data gathering. According to Nigeria Ministry of Health, an average of 1,000 birth takes place in the general hospitals in Oyo and Lagos state everyday, ranging from one birth, twins, triplets and once in a while, quadruplet. The general hospital organizes a two (2) month post-natal clinic for women who gave birth at the general hospital and in rare cases, birth records from other hospitals. The general hospitals in Lagos state organizes post-natal clinic every Tuesday and Friday, while those in Ibadan, Oyo state organizes post-natal clinic every Tuesday and Wednesday. The researcher was interested in nursing mothers of twins, hence, proceeded to women, attending post-natal clinic who gave birth to twins. Consent was gotten before administration of the questionnaires. Each questionnaire took a total of 15 minutes to answer.

2.5DATA ANALYSIS

Both descriptive and inferential statistics were used in the analysis of the data collected. Descriptive analysis will present the frequencies and percentages of socio-demographic variables in the study. Hypotheses one and two were tested using multiple regression analysis.

3.0 RESULTS

3.1 Introduction

This section presents results of gathered data from nursing mothers with twins, selected from six general hospitals in South-Western Nigeria; University College Hospital (UCH), Adeoyo General Hospital, Oluyoro General Hospital, Lagos University Teaching Hospital (LUTH), Isolo General Hospital and Lagos State University Teaching Hospital (LASUTH). The results are presented on the tables that follow.

3.2 Descriptive analysis of respondents

Table 1: Descriptive analysis of respondents

SN	Variable	Groups	Frequency	Percentage (%)
1	Age	Less than 20 years	2	0.7
		20-29 years	21	7.6
		30-39 years	106	38.4
		40-49 years	116	42
		50 years and above	31	11.2

2	Religion	Christianity	181	65.6
		Islam	81	29.3
		Traditional & Others	14	5.1
3	Marital status	Single parent	44	15.9
		Married	225	81.5
		Divorced/separated	7	2.5
4	Number of children	Less than 2 children	123	44.6
		3-4 children	102	37
		5 or more children	51	18.4
5	Family background	Monogamous	212	76.8
		Polygamous	64	23.2

From Table 1, frequency distribution revealed that (0.7%) of the respondents are less than or 20 years of age, 21(7.6%) are aged 20-29 years, 106(38.4%) are aged 30-39 years, 116(42.0%) are aged 40-49 years and 31(11.2%) are aged 50 and above. Religion distribution revealed that 181(65.6%0) of the respondents are Christians, 81(29.3%) are Muslims and 14(5.1%) are Traditional religion. Marital status frequency showed that 44(15.9%) of the respondents are single, 225(81.5%) are married and 7(2.5%) are either divorced or separated. Distribution by number of children showed that 123(44.6%) of the respondents have less than 2 children, 102(37.0%) have 3-4 children and 51(18.5%) have 5 or more than 5 children. Distribution by family background revealed that 212(76.8%) of the respondents are from a monogamous family while 64(23.2%) are from a polygamous family.

3.3 Zero order correlation among variables

Table 2: Zero-Order Correlation Summary Table showing the relationship among personality traits, perceived social support, work stress and parenting stress

SN	Variables	1	2	3	4	5	6	7	8	Mean	S.D
1	Parenting Stress	1								118.88	14.27
2	Social support	.60**	1							37.53	7.62
3	Extroversion	.20**	.24**	1						5.72	1.88
4	Consciousness	.32**	.25**	.33**	1					6.28	2.01
5	Agreeableness	.24**	.36**	.11**	.26**	1				6.32	2.05
6	Neuroticism	.26**	.29**	.66**	.69**	.26**	1			6.20	1.96
7	Openness	.19**	.31**	.33**	.21**	.59**	.30**	1		5.94	1.79
8	Work related stress	.04	.06	.05	.13*	.08	.18*	.09	1	36.37	7.61

Table 2 presents results on the relationship between parenting stress, personality traits and work-related stress among nursing mothers. It is shown that parenting stress had significant and positive relationship with social support ($r = .60$; $p<.05$), extroversion ($r = .20$; $p<.05$), conscientiousness ($r = .32$; $p<.05$), agreeableness ($r = .24$; $p<.05$), neuroticism ($r = .26$; $p<.05$) and openness to experience ($r = .19$; $p<.05$). However, only work-related stress had no significant relationship with parenting stress ($r = .04$; $p>.05$).

3.4 Hypotheses testing

Hypothesis one

Personality traits, perceived social support and work-related stress will jointly and independently predict parenting stress of nursing mothers with twins in South-Western Nigeria. This was tested using multiple regression analysis and the result is presented on Table 3;

Table 3: Multiple regression summary table showing personality traits, work-related stress and social support as predictors of parenting stress

Dependent variable	Independent variables	β	T	p	R	R^2	F	p
Parenting stress	Social support	.56	10.71	<.01	.63	.40	25.19	<.01
	Extroversion	.11	1.58	>.05				
	Consciousness	.22	3.23	<.01				
	Agreeableness	.01	.22	>.05				
	Neuroticism	-.11	-1.33	>.05				
	Openness	-.04	-.59	>.05				
	Work Related Stress	-.01	-.13	>.05				

From Table 3, it is shown that perceived social support, work-related stress and personality traits (extroversion, agreeableness, openness to experience, conscientiousness and neuroticism) jointly predicted parenting stress {R = .63; R^2= .40, F (7, 269) = 25.19; p<.05}. Collectively, perceived social support, work-related stress and personality traits (extroversion, agreeableness, openness to experience, conscientiousness and neuroticism) accounted for about 40% variance in parenting stress. However, only perceived social support (β = .56; t = 10.71; p<.05) and conscientiousness (β = .22; t = 3.23; p<.05) independently predicted parenting stress. This partially confirms the stated hypothesis, hence, will be retained in this study.

Hypothesis two

Socio-demographics (age and number of children) will jointly and independently predict parenting stress of nursing mothers with twins in South-Western Nigeria. This was tested using multiple regression analysis and the result is presented on Table 4;

Table 4: Multiple regression summary table showing age and number of children as predictors of parenting stress

Dependent variable	Independent variables	β	T	p	R	R^2	F	p
Parenting stress	Age	.07	1.18	>.05	.39	.15	8.17	<.01
	Number of children	.20	3.07	<.01				

From Table 4, it is shown that socio-demographic factors (age and number of children) jointly predicted parenting stress {R = .39; R^2= .15, F (2, 274) = 8.17; p<.01}. Collectively, age and number of children accounted for about 15% variance in parenting stress. However, only number of children (β = .20; t = 3.07; p<.01) independently predicted parenting stress. This partially confirms the stated hypothesis, hence, will be retained in this study.

4.0 Discussions and Conclusions

Hypothesis one which stated that perceived social support, work-related stress and personality traits (extroversion, agreeableness, openness to experience, conscientiousness and neuroticism) will jointly and independently predict parenting stress among nursing mothers with twins, was partially confirmed. Similarly, in an investigation of mothers of full-term and preterm twins conducted by Findler et al., (2007), maternal grandmother support predicted maternal marital adaptation and, when the infant's temperament was difficult, predicted maternal mental health. Despite its importance, however, family support appears to be most available immediately after the birth of a preterm or high-risk infant and decreases over the next few months (Rowe & Jones, 2010; Pinelli, 2000). Also, several studies provide evidence that Extraversion is positively associated with responsive, sensitive, emotionally engaged, and stimulating parenting (e.g., Belsky, Crnic, & Woodworth, 1995; Levy-Shiff&Israelashvilli, 1988). However, other studies detect no relation between Extraversion and parenting (Clark, Kochanska, & Ready, 2000; Kochanska et al., 2004). Another factor that could influence parenting stress of nursing mother is work-related stress.

It was concluded from this study that perceived social support, conscientiousness and number of children are significant independent predictors of parenting stress of nursing mothers with twins. It was therefore recommended that primary care hospital ensure to give proper orientation to both the husband and wife during prenatal care, the essence of assisting the mother even after giving birth. This will go a long way in preparing the husband for future role demands, even in taking care of the child. By these, the mother will have reduced parenting stress.

It was also recommended from this study that proper profiling of personality traits of not only mothers of twins, but of all mothers who are giving birth be done in order to assist health workers and psychologists on how best counseling be offered to the nursing mothers when parenting gets to a point of giving up. This will help greatly in reducing to a greater extent, the hopelessness and general level of depression that often comes with taking care of twins and children generally.

REFERENCES

Adekunle K.O and Adeyemo Y.O., (2013).Work-Life Balance and Parental Roles.*African Journal of Social Sciences, 12*, 87-99.

Aksüllü N. (2004). HuzurevindeveevdeyaúayanyaúlÕlardaalgÕlanansosyaldesteketkenleriiledepresyonarasÕndakiiliúki. *AnadoluPsikiyatriDergisi, 5*, 76-85.

Belsky, J. (1984). The determinants of parenting: A process model. *Child Development, 55*, 83–96.

Belsky, J., &Barends, N. (2002).Personality and parenting. In M. Bornstein (Ed.), Handbook of parenting: Vol. 3. *Being and becoming a parent* (2nd ed., pp. 415–438). Mahwah, NJ: Erlbaum.

Belsky, J., &Jaffee, S. (2006). The multiple determinants of parenting. In D. Cicchetti& D. Cohen

(Eds.), *Developmental psychopathology: Vol. 3*. Risk, disorder, and adaptation (2nd ed., pp. 38–85). New York: Wiley.

Belsky, J., Crnic, K., & Woodworth, S. (1995). Personality and parenting: Exploring the mediating role of transient mood and daily hassles. *Journal of Personality, 63*, 905–931.

Clark, L. A., Kochanska, G., & Ready, R. (2000).Mothers' personality and its interaction with child temperament as predictors of parenting behavior.*Journal of Personality and Social Psychology, 79*, 274–285.

Clarke, T. L. (2006). *Big Five personality and parenting behavior in mothers of children with ADHD.*Unpublished master's thesis, University of Maryland, College Park.

Deater-Deckard, K.D. (2004).*Parenting Stress*: Yale University Press.

Engur B., (2017). Parents with Psychosis: Impact on Parenting and Parent-Child Relationship. *Journal of Child and AdolescenBehaviour, 5* (1), 1-4.

Findler L, Ben-Ari OT, Jacob K. (2007). Internal and external contributors to maternal mental health and marital adaptation one year after birth: Comparisons of mothers of pre-term and full-term twins. *Women & Health. 46*(4):39–60.

Folkman, S., Lazarus, R.S., Dunkel-Schetter, C, DeLongis, C &Gruen, R. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology, 50*, 992-1003.

Gulacti F., (2010). The effect of Perceived Social Support on Subjective Well-being.*Procedia Social and Behavioral Sciences 2*, 3844–3849.

Hoekstra C, Zhao ZZ, Lambalk CB, Willemsen G, Martin NG, Boomsma DI, Montgomery GW.(2008). Dizygotic twinning.*HumReprod Update*, *14*(1):37-47.

Holmlund-Rytkönen, M., Strandvik, T. (2005), Stress in business relationships, *Journal of Business & Industrial Marketing, 20*(1): 12-22.

John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative Big Five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 114–158). New York, NY: Guilford.

Johnson, J. H., & Reader, S. K. (2002). Assessing stress in families of children with ADHD: Preliminary development of the disruptive behavior stress inventory (DBSI). *Journal of Clinical Psychology in Medical Settings, 9*, 51-62.

Kochanska, G., Aksan, N., & Nichols, K. (2003).Maternal power assertion in discipline and moral discourse contexts.*Developmental Psychology, 39*, 949–963.

Kochanska, G., Friesenborg, A. E., Lange, L. A., & Martel, M. M. (2004).The parents' personality and the infants' temperament as contributors to their emerging relationship.*Journal of Personality and Social Psychology, 86,* 744–759.

Levy-Shiff, R., &Israelashvili, R. (1988). Antecedents of fathering: Some further exploration. *Developmental Psychology, 24,* 434–440.

Lim, L. L. (2009). Female labour-force participation. In United Nations (Eds.), *Completing the fertility transition* (pp. 203-221). United Nations Publication. Retrieved from http://www.un.org/esa/population/publications/completingfertility/RevisedLIMpaper

Machin G. (2009). Familial monozygotic twinning: a report of seven pedigrees. Am J Med Genet C Semin Med Genet, 151C(2):152-4.

Markon KE, Krueger RF, Watson D. (2005).Delineating the structure of normal and abnormal personality: Anintegrative hierarchical approach.*JPers So Psychol, 88*(1): 139±157.

Nair, E. (2011). Urban career women and stress in Southeast Asia. *Journal of Adult Development, 18*(2), 62-65.

Pinelli J. (2000). Effects of family coping and resources on family adjustment and parental stress in the acute phase of the NICU experience. *Neonatal Network, 19*(6):e27–e37.

Ribeiro, M. F. M., Porto, C. C., &Vandenberghe, L. (2013). Parenting Stress in Families of Children with Cerebral Palsy: An Integrative Review. *Ciência&SaúdeColetiva, 18,* 1705-1715.

Rice PL. (1999). *Stress and Health. 3rd Ed.* USA: Brooks/Cole Publishing Company.

Rowe J, Jones L. (2010). Discharge and beyond: A longitudinal study comparing stress and coping in parents of preterm infants. *Journal of Neonatal Nursing, 16*:258–266.

Selye, H., (1947). *The stress of life*. New York: McGraw Hill.

Smith, C. L., Spinrad, T. L., Eisenberg, N., Payne, T., K., Gaertner, B. M., &Maxon, E. (2007). Maternal personality: Longitudinal relations to parenting behavior and maternal emotional expressions toward toddlers. *Parenting: Science and Practice, 7,* 305–329.

Song Y. and Shi M. (2017).Associations between empathy and big five personality traits among Chinese undergraduate medical students.*PLoS ONE 12*(2): e0171665. doi:10.1371/journal.

Stanton, J. M., Balzer, W. K., Smith, P. C., Parra, L. F., &Ironson, G. (2001). A general measure of work stress: The stress in general scale. *Educational and Psychological Measurement, 61*(5), 866-888.

Tan M. &Karabulutlu E., (2005). Social support and hopelessness in Turkish patients with cancer. Cancer *Nursing, 28,* 236-240.

Zimet, G.D., Dahlem, N.W., Zimet, S.G. & Farley, G.K. (1988).The Multidimensional Scale of Perceived Social Support.*Journal of Personality Assessment, 52,* 30-41.