
Parenting Styles and Learned Helplessness in Mathematics: Do Gender and Region Matter?

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Abstract – Several studies have identified learned-helplessness as a factor in scholastic functioning. Relatively few have related home experiences with learned-helplessness in students. The main purpose of this study was to determine gender and regional influences on the relationship between students' perceived parenting styles and their perceived learned-helplessness in Mathematics. One hundred and eighty-five secondary school students, 94 boys (51%) and 91 girls (49%), completed self-report questionnaires assessing demographics, perceived parenting-styles and learned-helplessness in Mathematics. Autocratic parenting styles related to higher levels of perceived learned-helplessness in Mathematics than the democratic parenting styles did. Parenting style related significantly and negatively with learned helplessness in mathematics for rural but not for urban students, and also for boys but not for girls. In addition, boys and girls perceived parenting style and learned helplessness the same way. Rural students were more helpless in Mathematics than the urban students were. There was no regional difference in perceived parenting style. Parents were seen as partners in Mathematics education. The results showing regional and gender differences suggest that a more targeted approach to intervention is required.

Keywords – Parenting Styles, Learned-Helplessness, Perceived Parenting Styles, Perceived Learned Helpless in Mathematics.

I. INTRODUCTION

Mental wellbeing is a dynamic state of the mind [1]. It determines how we feel and express the feelings, associate with others, realize our own potentials and be productive in our community, and cope with the normal stresses of day-to-day life [2]. It is beneficial to us in different ways. It enables us to enjoy life and environment, be resilient (i.e., be able to recover from feelings of sadness and anger as result of loss), be creative, learn, try new things and take risks, and cope with difficult times in our professional, academic and/or personal lives [3]. It is essential in school outcomes. General poor mental health [4], depression, anxiety and eating disorder [5] are strongly associated with lower academic achievement and higher probability of dropping out of school. Mental health problems lead to social consequences (i.e., attention problems, delinquency and substance abuse) which in turn cause diminished academic achievement [6]. Studies on the nurturance of mental wellbeing have operationalized it into its components such as anxiety, stress, depression, psychological distress, mental disorders [7, 8, 9, 10, 11, 5, 12] happiness and vitality [13]. However, very few, if any, have considered learned helplessness as a component of mental wellbeing. These studies have also shown the importance of physical, social and psychological factors in the mental state. Physical exercises reduce depression and anxiety while enhancing self-esteem, mood states, sleep, resilience to stress, cognitive functioning, academic achievement, physical self-perception [14], and self-efficacy [15]. On social factors, gender, unemployment, financial difficulties, insufficient social support, substance abuse [16], violence [17], and bullying [18] are strongly associated with poor mental wellbeing. Some of the psychological factors associated with mental wellbeing include exposure to psychologically traumatic events [11], willingness to disclose emotional status [19] and psychological factors of stigma by association [20]. The previous studies have emphasized depression, anxiety and stress as components

of mental health while ignoring learned helplessness. Parenting has not featured among the social factors in mental wellbeing. In the current study, I correlated students' perceived parenting style (SPPS) with students' perceived learned helplessness in mathematics (SPLHM) in order to establish the parents' role in the development of learned helplessness as a component of students' mental wellbeing. In addition, I investigated the role played by gender and region in the relationship between the parenting style and learned helplessness.

Parenting Styles

Baumrind's theory of parenting portrays parenting styles as the varying social environments in the family where children grow and develop [21]. The degree to which the two dimensions of demandingness and supportiveness are integrated determines the type of environment. The degree of integration in turn predicts the child's future performance in life, including in scholastic endeavors in the informal and formal learning contexts. Baumrind identifies three parenting types based on the degree of integration of the two dimensions of parental behavior. Authoritarian parenting style is the situation where the parents are less responsive to the child's emotional and developmental needs while being highly controlling. Authoritative parenting is high in both demandingness and supportiveness dimensions. Authoritative parents impose reasonable but demanding expectations on the child while being warm, understanding and accommodative of the child's points of view. Parents who exhibit permissive parenting style tend to be undemanding while being warm and responsive to the child. In the current study, I hypothesized authoritarian (autocratic) style would nurture increased learned helplessness in Mathematics than authoritative (democratic) style would.

Learned-Helplessness

"Learned helplessness is the giving-up reaction, the quitting response that follows from the belief that whatever you do doesn't matter" [22, p. no page]. People develop the sense of learned-helplessness when subjected to uncontrollable and aversive experiences and learn to be helpless in similar situations even when the experiences are controllable [23]. People, for example, develop a belief in which they are incapable of changing the uncontrollable conditions, solving a problem or achieving more, even when given favorable opportunities to do so [24]. Since learned-helplessness causes motivational deficits in humans, [25] its association with other personality traits and educational performance has been of interest to investigators. It is positively associated with external locus of control [26], which in turn is associated with poor academic performance [27]. So learned helplessness should be of interest to educators due to its indirect association with the deleterious academic outcomes.

Parenting Styles and Learned Helplessness

Filippello, et al. [28] studied a mechanism through which learned helplessness develops by observing 186 in-school adolescents aged between 14 and 18 years. Specifically, they tested the mediation role of school self-efficacy (SSE) in the relationship between perceived parental psychological control (PPPC) and learned helplessness (LH). The complete mediation, which they established, indicates that, by controlling the mediator variable (SSE), the predictor variable (PPPC) would no longer have any effect on the criterion variable (LH) [29]. In other words [30], the mediator variable (SSE) explained how the predictor variable (PPPC) came to be associated with the criterion variable (LH). In Kenny's discussion [29], the first step in mediational analysis is to show that a significant correlation exists between the predictor variable (i.e., PPPC) and the criterion variable (i.e.

LH). Filippello, et al. established this by demonstrating that paternal and maternal psychological controls, taken separately, correlated significantly with LH in positive directions. The more the adolescents perceived their parents as psychologically intrusive, the more they (adolescents) experienced helplessness in their learning environment.

Filippello, et al. [28] study considered only one of the three basic dimensions [31] of parenting style namely: warmth, behavioral control, and psychological control. Darling [31] suggests that the first two dimensions (warmth and behavioral control) constitute authoritative parenting style. The third dimension, psychological control, defines the authoritarian parenting style. In the current study, I collapsed the three dimensions into two: Democratic and autocratic styles to form the two opposing poles in the parenting style continuum.

Gender and Learned Helplessness

Very little exists on the gender influence on learned helplessness. Nenty and Ogwu [32] did not establish any significant influence of gender on learned helplessness. However, studies on the influence of gender on psychological variables closely associated with learned helplessness have consistently shown that gender is a factor in them. For example, learned helplessness has been shown to be associated with external locus of control [33], self-concept [34], anxiety [35], and depression [36]. Gender is associated with locus of control [37], self-concept [38], anxiety [39], and depression [40]. There is, therefore, a good reason to suspect that gender would be associated with learned helplessness.

Gender and Parenting Styles

Research on the influence of gender on how students perceive parental styles has consistently shown variations in perceptions depending on the students' gender [41]. Females perceive more favorable parenting styles than males [42]. They perceive their parents as more authoritative than boys do [43]. Gender role identity (undifferentiated, feminine, masculine, and androgynous) of college students is strongly associated with the students' perceived parenting styles [44]. It was predicted that gender would influence students' perception of their parents' parenting styles.

Region and Learned Helplessness

Very scanty direct literature, if any, is available on regional relationships with learned helplessness. With the assumption that urban and rural regions should have different cultures with different impacts on human behavior [45], I reviewed cultural influences on learned helplessness in order to make inferences about the regional influence on learned helplessness. In exploring the relationship between organizational culture and learned helplessness, Saxena and Shah [46] found that positive cultural values related negatively with learned helplessness. The more the positive values were applied the less helpless the workers in the organizations felt. Shilpa and Manohar [47] argue that organizational culture nurtures three types of attributional tendencies (i.e., internal attribution, external attribution, and global attribution) which have been associated with varying levels of learned helplessness [48]. These findings suggest that learned helplessness possibly develops differently in different regions such as the rural and urban regions where schools are located.

Region and Parenting Style

Studies on socio-ethno-cultural impacts on parenting suggest that region (urban or rural set-up) may affect the

students' perception of their parents' styles of parenting. Kovess-Masfety et al. [49], established that parenting styles, particularly the caring and punitive attitudes, differed significantly across the regions of origin of mothers. Among the socio-ethno-cultural groups included in the study (the Caribbean/African group, the Maghreb and the French natives), the Caribbean/African group had the highest prevalence of parental punitive attitudes.

Socio-economic status varies by region (rural or urban) [50]. Studies that relate socioeconomic status with parenting may suggest regional influences on parenting. Rosanneke et al. [51], determined that low socioeconomic status predicts inferior parenting through family stress. This finding suggests a regional variation in parenting. It was predicted that students would perceive parenting styles differently depending on the regions (rural or urban) their schools were situated.

The Study Objectives

The main objective of the current study was to explore gender and regional differences in the relationship between students' perceived parenting style (SPPS) and students' perceived learned helplessness in Mathematics (SPLHM). The minor objectives were to explore gender and regional differences in students' perceived parenting style (SPPS) and students' perceived learned helplessness in Mathematics (SPLHM).

II. METHODS

Participants

One hundred and eighty five (185) secondary school students (51% boys and 49% girls) drawn from form three classes in mixed-day secondary schools in two out of the 47 counties in Kenya (i.e., Kisumu and Siaya counties) participated in this study. Ninety-six (96) participants were drawn from an urban setup (i.e. Kisumu City - boys [49%]; girls [51%]) and 89 from a rural setup (i.e. Siaya - boys [53%]; girls [47%]). The rural and urban setups are approximately 75 kilometers apart.

Measures

Students' Perceived Learned-Helplessness in Mathematics (SPLHM)

I used a 24-item questionnaire assessing four dimensions of learned-helplessness (i.e., locus of control, stability, controllability, and responsibility) to measure students' perceived learned-helplessness in Mathematics (SPLHM). The scale was reliable, $r = .33$, $p < .05$ and valid, $r = -.32$, $p < .05$. The items indicating "learned-helplessness in Mathematics" and those indicating "non-learned-helplessness in Mathematics" were alternately arranged to reduce acquiescence and extreme response biases. The items indicating "learned helplessness in Mathematics" (e.g., "some students feel that however hard they try, they can never do well in Mathematics") were scored in a descending order as, "Really true for me" (4 points); "Sort of true for me" (3 points); "Sort of not true for me" (2 points); and "Really not true for me" (1 point). I reversed the scoring for the items indicating "non-learned helplessness in Mathematics" (i.e. "some students work harder in Mathematics, so they do well") as follows: "Really true for me" (1 point); "Sort of true for me" (2 points); "Sort of not true for me" (3 points); and "Really not true for me" (4 points).

The SPLHM score ranged from 24 to 96. High scores indicated high levels of SPLHM and vice versa. A score of 48 or below indicated low level of SPLHM and that above 48 indicated high level of SPLHM.

Students' Perceived Parenting Style (SPPS)

I adapted a parenting style scale from Chiew's [52] scale to measure students' perceived parenting style (SPPS). The adapted scale was reliable, $r = .79, p < .05$. The 20-item parenting scale assessed students' perceived parenting style (SPPS) as democratic or autocratic. Each item, rated on a four-point Likert-type scale, distinguished between democratic and autocratic parenting styles. The scores ascended from "Very untrue for my family" (1 point) to "Very true for my family" (4 points) for the items indicating a perception of democratic tendencies in the family. For those indicating a perception of autocratic tendencies in the family, the scores descended from "very untrue for my family" (4 points) to "very true for my family" (1 point). The aggregate score for the 20 items in the questionnaire ranged from 20 to 80. A tendency towards the minimum side of the parenting-style continuum indicated a perceived autocratic parenting style and that towards the maximum side, a democratic parenting style. Specifically, a score equal to or below 50 indicated an autocratic parenting style and that above 50 indicated a democratic parenting style.

Procedure

I administered the questionnaires to the participants as a group in a session that lasted for approximately 30 minutes. I visited the individual schools to administer the questionnaires and collect the responses at the end of the administration period. The response rate was therefore 100%. However, during the data analysis, I could not process some incomplete responses.

To ensure confidentiality, I gave each participant a code to write on the self-rating questionnaires. I advised the participants not to make any markings on the self-rating questionnaires that would make it possible to identify them after the administration of the questionnaire.

III. RESULTS

Gender and Regional Differences in the Relationship between Students' Perceived Parenting Style (SPPS) and Students' Perceived Learned Helplessness in Mathematics (SPLHM)

Table 1 contains the correlation coefficient values (r) for the relationships between students' perceived parenting styles (SPPS) and students' perceived learned helplessness in Mathematics (SPLHM). SPPS and SPLHM correlated significantly in opposing directions when all students were considered. Analysis by region showed a significant and negative correlation for rural students but an insignificant negative correlation for urban students. Analysis by gender resulted into a significant and negative correlation for the combined urban and rural boys, for urban boys and for rural boys. However, the two variables (SPPS and SPLHM), did not correlate at all for the combined urban and rural girls, and urban girls. There was a very weak and positive correlation for rural girls. In general, SPPS influenced SPLHM. In particular, the influence of SPPS on SPLHM was more pronounced for boys than it was for girls.

Table 1. Correlation (r) between the Students' Perceived Parenting Styles (SPPS) and the Students' Perceived Learned Helplessness in Mathematics (SPLHM) by Gender and Region

Region	Students											
	All ^a				Boys				Girls			
	<i>N</i>	<i>r</i>	<i>df</i>	<i>p</i>	<i>n</i>	<i>r</i>	<i>df</i>	<i>p</i>	<i>n</i>	<i>r</i>	<i>df</i>	<i>p</i>
Combined ^b	185	-.21*	183	.004	94	-.31**	92	.002	91	0	89	1

	Students											
	All ^a				Boys				Girls			
Urban	96	-.10	94	.332	47	-.32*	45	.028	49	0	47	1
Rural	89	-.23*	87	.030	47	-.34*	45	.019	42	.10	40	.53

^aAll = Boys and girls together. ^bCombined = Urban and rural students together.

*p < .05. **p < .01.

Gender Difference in Students' Perceived Parenting Style (SPPS) and Students' Perceived Learned Helplessness in Mathematics (SPLHM)

To examine the gender differences in students' perceived parenting style (SPPS) and in students perceived learned helplessness in Mathematics (SPLHM), I ran independent samples t-tests. The t-test results (t), including the effect sizes (d) and the associated 95% confidence intervals [95% CI], are shown in Table 2.

All the mean scores for SPPS are above 50 showing that, irrespective of their gender, students tend to perceive democratic parenting attitudes in their parents. However, the results of the t-tests did not establish any significant gender differences in SPPS between the combined rural and urban boys and the combined rural and urban girls. When the rural students' data were analysed, no statistical difference was found between rural boys and rural girls. Similarly, no difference was found between urban boys and urban girls. All the insignificant differences were accompanied with small effect sizes. The results, thus, showed that girls and boys perceive their parents' parenting approach in a similar manner.

The results pertaining to students' perceived learned helplessness in Mathematics (SPLHM) indicate that both boys and girls experience high levels of learned helplessness in Mathematics. The t-test results did not establish any significant gender differences in SPLHM between the combined rural and urban boys and the combined rural and urban girls. When the rural students' data were analysed, no statistical difference was found between rural boys and rural girls. Similarly, no difference was found between urban boys and urban girls. All the insignificant differences were associated with small effect sizes. The t-test results showed boys and girls as experiencing learned helplessness in Mathematics in a similar way.

Table 2. Mean-scores (M) of the Students' Perceived Learned Helplessness in Mathematics (SPLHM) and the Students' Perceived Parenting Styles (SPPS), Standard Deviations (SD), t-values (t), and d-values by Gender

Region	Gender						t [95% CI]	df	p	d ^b [95% CI]
	Boys			Girls						
Students' Perceived Learned Helplessness in Mathematics (SPLHM)										
Combined ^a							-0.82			-0.12
	94	53.21	7.11	91	54.02	6.31	[-2.76, 1.14]	181	.41	[-1.56, 1.18]
Rural							-0.70			-0.15
	47	54.68	5.49	42	55.52	5.78	[-3.22, 1.54]	84	.49	[-1.72, 1.60]
Urban							-0.75			-0.15
	47	51.74	6.46	49	52.73	6.51	[-3.62, 1.64]	93	.46	[-2.00, 1.67]
Students' Perceived Parenting Styles (SPPS)										
Combined ^a							-0.64			-0.09
	94	53.97	5.98	91	54.49	5.09	[-2.13, 1.09]	180	.53	[-1.30, 0.95]
Rural							-0.56			-0.12
	47	53.15	6.79	42	53.86	5.07		84	.58	

	Gender						t	df	p	d ^b [95%CI]
	Boys			Girls						
Urban	47	54.79	4.99	49	55.04	5.09	[-3.22, 1.80]	93	.81	[-2.06, 1.41]
							-0.24			-0.05
							[-2.29, 1.79]			[-1.48, 1.38]

^aCombined = rural and urban students together. ^bCohen's *d* (Cohen, 1988): $0 < d \leq 0.2$ (Small effect, Near 0 = No effect); $0.2 < d < 0.8$ (Medium effect); $d \geq 0.8$ (Large effect)

Regional Difference in Students' Perceived Learned Helplessness in Mathematics (SPLHM) and Students' Perceived Parenting Style (SPPS)

I ran independent-samples t-tests to determine regional differences in students' perceived learned helplessness in Mathematics (SPLHM) and students' perceived parenting style (SPPS). Table 3 displays the t-test outcomes (t) and the associated effect sizes (d) together with the respective 95% confidence intervals [95% CI]. Considering results pertaining to SPLHM, the rural students were significantly more helpless than urban students with an associated medium effect. When gender was held constant, rural boys were significantly more helpless than urban boys with a medium effect size. Similarly, rural girls were more helpless than urban girls with an even stronger medium effect. The results of the t-test showed that region influences the level of learned helplessness in Mathematics which students experience.

The t-test results on data related to students' perceived parenting style (SPPS) indicated no statistically significant differences between rural students and urban students even though the effect size was moderate. When data from boys and girls were analysed separately, there was no statistical regional difference between rural boys and urban boys. However, the effect size was moderate. Similarly, no significant difference between rural girls and urban girls was found even with a moderate effect size. The results suggested no influence of region on how students perceive the parenting attitudes of their parents.

Table 3. Sample Size (n), Mean-scores (M) of the Students' Perceived Learned Helplessness in Mathematics (SPLHM) and the Students' Perceived Parenting Styles (SPPS), Standard Deviations (SD), and Computed t-values (t) by Region

Variable	Region						t [95%CI]	df	p	d ^b [95%CI]
	Rural			Urban						
	n	M	SD	n	M	SD				
All Students										
SPLHM	89	55.08	6.71	96	52.25	6.47	2.92** [0.92, 4.75]	180	.00	0.43 [-0.96, 1.73]
SPPS	89	53.48	6.01	96	54.92	5.02	-1.76 [-3.05, 0.17]	172	.08	-0.26 [-1.51, 0.74]
Boys only										
SPLHM	47	54.68	7.49	47	51.74	6.46	2.04* [0.07, 5.81]	90	.05	0.42 [-1.72, 2.27]
SPPS	47	53.15	6.76	47	54.79	4.99	-1.34 [-4.08, 0.80]	84	.18	-0.28 [-2.21, 1.15]
Girls only										
SPLHM	42	55.52	5.78	49	52.73	6.51	2.17* [0.23, 5.35]	88	.03	0.46 [-1.29, 2.28]

SPPS	Region						-1.10 [-3.30, 0.94]	86	.27	-0.23 [-1.77, 1.19]
	Rural			Urban						
	42	53.86	5.07	49	55.04	5.09				

Note. SPLHM = Students' perceived learned helplessness in Mathematics. SPPS = Students' perceived parenting styles.

^bCohen's *d* (Cohen, 1988): $0 < d \leq 0.2$ (Small effect, Near 0 = No effect); $0.2 < d < 0.8$ (Medium effect); $d \geq 0.8$ (Large effect)

* $p < .05$ ** $p < .01$

IV. DISCUSSION

The main objective of the current study was to explore gender and regional differences in the relationship between students' perceived parenting style (SPPS) and students' perceived learned helplessness in Mathematics (SPLHM). The minor objectives were to explore gender and regional differences in students' perceived parenting style (SPPS) and students' perceived learned helplessness in Mathematics (SPLHM). Overall, SPPS correlated significantly and in an opposite direction with SPLHM. The correlation remained significant for rural students but not for urban students. It remained significant for boys but not for girls.

Students' Perceived Parenting Style (SPPS) and Students' Perceived Learned-Helplessness in Mathematics (SPLHM)

Overall, students who perceive democratic attitudes in their parents' child-rearing styles tend to be less helpless in Mathematics. On the other hand, those who perceive autocratic attitudes appear to be victims of learned-helplessness in Mathematics. This is in line with the prediction that autocratic parenting styles would expose students from such families to extensive lack of control. The students would fail to develop the instrumental relationship between one's behaviour and its consequences. The parenting style would foster an external locus of control, which in turn, would lead to learned-helplessness behaviour [53]. Democratic family styles inculcate instrumental relationship between ones behaviour and its consequences in family members. This parenting style fosters an internal locus of control in family members [54], which conceivably leads to less learned-helplessness behaviour [55].

The influence of learner's perception of parental child rearing attitude is particularly more critical for boys than girls who show either weak or no relationship at all between perception of parental child rearing attitude and learned helplessness in Mathematics. The influence is also more important for rural students than urban students for whom the relationship is insignificant. Generally, therefore, parents should emphasize democratic parental styles to develop healthy psychological construct in their children to help the children do well in mathematics at school. They should give children opportunity to contribute to decision making to develop their sense of control over their behaviors. Specifically, this emphasis should be directed to boys more than girls, and to rural students more than urban students.

Gender Differences in Students' Perceived Parenting Styles (SPPS) and Students' Perceived Learned Helplessness in Mathematics (SPLHM)

Being a boy or a girl does not appear to matter in the way students perceive their level of learned helplessness in Mathematics and parental child rearing practices. No gender differences exist in the way students perceive their

parents' style of child rearing. This outcome is contrary to the gender differences established in the past studies [42]. This can be explained by the fact that in the current study both boys and girls predominantly perceived democratic tendencies in their parents as opposed to the reports in the previous studies. The results of Steinberg, et al. [56], which suggest that culture can influence the way students perceive parenting style, may also explain why this result in an African culture differs from the results from European and Asian cultures.

No gender differences exist in the perceived levels of learned helplessness in Mathematics. This is consistent with the results of Nenty and Ogwu [32] but inconsistent with studies that have related gender with components of mental health other than learned helplessness [33]. Cultural influences could be a reason for the noted inconsistency given that the only study in an African culture conforms to the current finding.

Regional Influence on Students' Perceived Learned-Helplessness (SPLHM) and Students' Perceived Parenting Styles (SPPS)

The students' regional setup is an important factor in their perception of their levels of learned helplessness in Mathematics. Rural students appear to be more helpless in Mathematics than urban students are. Assuming that cultural differences exist in different regional setups, this finding is supported by Shilpa and Manohar's [47] suggestion that different organizational cultures nurture different attributional tendencies which, in turn, define different levels of learned helplessness [48].

Even though urban students apparently perceive more democratic tendencies in their parental child-rearing attitudes than the rural students do, region appears to be statistically less important factor in how students perceive their parents' child rearing practices. There are no direct study results with which to compare this result. However, the indirect result of the varying parental styles across parental regions of origin [49], suggest that students should differ in their perceptions of parenting across their regions.

Limitations and Suggestions for Further Research

The current study has some limitations that could have compromised the results. Whereas day schools were purposefully chosen to include students in contact with their parents on a daily basis, their perception on parenting ought to have been correlated with the parental views to ascertain their accuracy. The self-report measures are potentially open to response bias compromising the validity of the responses. The correlation research design could not allow causal relationships to be established. Finally, the limited scope could not allow generalization to a larger population.

In the present research, I studied student's perception of parental child rearing styles, which has forgetfulness and inaccuracy as inherent shortcomings. A replication should be carried out where both the parents and students are assessed in their perception of parenting styles in order to come up with a more accurate representation of the parenting styles in the families. Other factors like socio-economic status are known to influence parenting and performance in school [57]. Future studies should include this as a covariate. Learned helplessness was considered an important variable to study because of its assumed relationship to performance in Mathematics. A future study should test this assumption by studying its relationship with achievement in Mathematics.

V. CONCLUSION

The results of this study support the hypothesis that parenting style influences students' learned-helplessness in

Mathematics. Democratic families produce students with low level of learned helplessness in Mathematics while autocratic ones produce students with higher levels of learned helplessness. However, the findings suggest that the relationship between parenting style and learned helplessness in Mathematics is influenced by region and gender of the students. Any intervention to reduce learned helplessness in Mathematics may have to be gender and region specific. It may be important to focus more on rural than urban students, and boys than girls when trying to reduce the influence of parenting styles on learned helplessness in Mathematics.

REFERENCES

- [1] Mind, "How to improve your mental wellbeing," 2013. [Online]. Available: <https://www.mind.org.uk/information-support/tips-for-everyday-living/wellbeing/#.XJHcBjR1Pa>.
- [2] WHO, "Mental health: a state of well-being," August 2014. [Online]. Available: https://www.who.int/features/factfiles/mental_health/en/.
- [3] Canadian Mental Health Association, "Benefits of Good Mental Health," 2019. [Online]. Available: <https://toronto.cmha.ca/documents/benefits-of-good-mental-health/>.
- [4] M. Bostani, A. Nadri and A. R. Nasab, "A study of the relation between mental health and academic performance of students of Islamic Azad University Ahvaz branch," *Procedia - Social and Behavioral Sciences*, vol. 116, pp. 163-165., 2014.
- [5] D. Eisenberg, E. Golberstein and J. B. Hunt, "Mental health and academic success in college," *The B.E. Journal of Economic Analysis & Policy*, vol. 9, no. 1, pp. 1935-1682, 2009.
- [6] J.D. McLeod, R. Uemura and S. Rohman, "Adolescent Mental Health, Behavior Problems, and Academic Achievement," *J Health Soc Behav*, vol. 53, no. 4, p. 482-497, 2012.
- [7] C. Propper, A. Bolster and S. Burgess, "Local neighborhood and mental health: evidence from the UK," *Soc. Sci. Med.*, vol. 61, no. 10, pp. 2065-2083, 2005.
- [8] H.F. Guite, C. Clark and G. Ackrill, "The impact of the physical and urban environment on mental well-being," *Public Health*, vol. 120, no. 12, pp. 1117-1126, 2006.
- [9] S. Weich, M. Blanchard, M. Prince, E. Burton, B.O.B. Erens and K. Sproston, "Mental health and the built environment: cross-sectional survey of individual and contextual risk factors for depression," *Br J Psychiatry*, vol. 180, no. 5, pp. 428-433, 2002.
- [10] A. Ellaway, S. Macintyre and A. Kearns, "Perceptions of place and health in socially contrasting neighborhoods," *Urban Stud.*, vol. 38, no. 12, 2001.
- [11] Z. Steel, D. Silove, T. Phan and A. Bauman, "Long-term effect of psychological trauma on the mental health of Vietnamese refugees resettled in Australia: a population-based study," *The Lancet*, vol. 360, no. 9339, pp. 1056-1062, 2002.
- [12] C. Propper, S. Burgess, A. Bolster, G. Leckie, K. Jones and R. Johnston, "The impact of neighborhood on the income and mental health of British social renters," *Urban Stud*, vol. 44, no. 2, 2007.
- [13] P. Howden-Chapman, N. Pierse, S. Nicholls, J. Gillespie-Bennett, H. Viggers and M. Cunningham, "Effects of improved home heating on asthma in community dwelling children: randomised controlled trial," *Br Med J.*, vol. 337, pp. 1411a-, 2008.
- [14] S.J.H. Biddle and M. Asare, "Physical activity and mental health in children and adolescents: A review of reviews," *British Journal of Sports Medicine*, vol. 45, no. 11, pp. 886-895, 2011.
- [15] G.W. White, *Mental health and academic achievement: The effect of self-efficacy* (Unpublished doctoral dissertation), The State University of New Jersey, New Brunswick, New Jersey, 2016.
- [16] H. Viinamäki, O. Kontula, L. Niskanen and K. Koskela, "The association between economic and social factors and mental health in Finland," *Acta Psychiatrica Scandinavica*, vol. 92, no. 3, pp. 208-213, 1995.
- [17] A.L. Coker, P.H. Smith, M.P. Thompson, R.E. McKeown, L. Bethea and K.E. Davis, "Social Support Protects against the Negative Effects of Partner Violence on Mental Health," *Journal of Women's Health & Gender-Based Medicine*, vol. 11, no. 5, 2004.
- [18] K. Rigby, "Effects of peer victimization in schools and perceived social support on adolescent well-being," *Journal of Adolescence*, vol. 23, no. 1, pp. 57-68, 2000.
- [19] D.J. Rickwood and V.A. Braithwaite, "Social-psychological factors affecting help-seeking for emotional problems," *Social Science & Medicine*, vol. 39, no. 4, pp. 563-572, 1994.
- [20] M. Ostman and L. Kjellin, "Stigma by association: Psychological factors in relatives of people with mental illness," *The British Journal of Psychiatry*, vol. 181, no. 6, pp. 494-498, 2002.
- [21] D. Baumrind, "Effects of Authoritative Parental Control on Child Behavior," *Child Development*, vol. 37, no. 4, pp. 887-907, 1966.
- [22] Arnold Schwarzenegger Quotes, n.d. [Online]. Available: https://www.brainyquote.com/quotes/arnold_schwarzenegger_119071.
- [23] J.B. Overmier and M.E.P. Seligman, "Effects of inescapable shock upon subsequent escape and avoidance learning," *Journal of Comparative and Psychological Psychology*, vol. 63, pp. 28-33, 1967.
- [24] Olga, "Equal opportunities issue, gender gap and learned helplessness?," 6 August 2017. [Online]. Available: <https://medium.com/@matvolga/equal-opportunities-issue-gender-gap-and-learned-helplessness-68d113dcc0b6>.
- [25] S.B. Schepman and F.L. Richmond, "The effects of learned helplessness on performance efficacy and control expectancies," *Research Journal of the ooi Academy International Congress (RJooiAIC)*, vol. 1, no. 1, p. 1-7, 2003.
- [26] Depression, "Depression, helplessness, hopelessness and external locus of control," 2009. [Online]. Available: <http://www.kellelevision.com/kellelevision/2009/06/depression-helplessness-hopelessness-and-external-locus-of-control.html>.
- [27] P.P.P. Das and P. Pattanaik, "Self-Esteem, Locus of Control and Academic Achievement among Adolescents," *International Journal of Scientific Research in Recent Sciences*, vol. 1, no. 1, p. 1-5, 2013.
- [28] P. Filippello, L. Sorrenti, C. Buzzai and S. Costa, "Perceived parental control and learned helplessness: The role of self-efficacy," *School Mental Health: A Multidisciplinary Research and Practice Journal*, vol. 7, no. 4, pp. 298-310, 2015.
- [29] D.A. Kenny, "Mediation," 28 September 2016. [Online]. Available: <http://davidakenny.net/cm/mediate.htm>.
- [30] A. Butler, "Moderator Mediator," n.d. [Online]. Available: https://sites.uni.edu/butlera/courses/org/modmed/moderator_mediator.htm.
- [31] N. Darling, "Is Your Parenting Psychologically Controlling?," 24 October 2012. [Online]. Available: <https://www.psychologytoday.com/blog/thinking-about-kids/201210/is-your-parenting-psychologically-controlling>.
- [32] H.J. Nenty and N.E. Ogwu, "Influence of Gender and Learned Helplessness on Some Mathematics-Related Cognitive Behaviour of Lesotho Senior Secondary School Students," *Gender & Behaviour*, vol. 7, no. 1, p. 81-92, 2009.
- [33] D.G. Sayid and K. Milad, "Gender differences in factors affecting academic performance of high school students," *Procedia Social and*

- Behavioral Sciences, vol. 15, p. 1040–1045, 2011.
- [34] R. Diana, S. Diomira, S. M. Guadalupe and E. Victoria, "The mediating role of social relationships in the association of adolescents' individual school self-concept and their school engagement, belonging and helplessness in school," *An International Journal of Experimental Educational Psychology*, vol. 35, no. 2, pp. 137-157, 2013.
- [35] R. Diana, R. Nicola and A.W. Megan, "Test anxiety and learned helplessness is moderated by student perceptions of teacher motivational support," *An International Journal of Experimental Educational Psychology*, vol. 38, no. 1, pp. 54-74, 2017.
- [36] W.R. Miller and M.E. Seligman, "Depression and learned helplessness in man," *Journal of Abnormal Psychology*, vol. 84, no. 3, pp. 228-238, 1975.
- [37] C.S. Adrian, E.H. Graham and L.W. Robert, "Gender differences in the locus of control construct," *Psychology & Health*, vol. 12, no. 2, pp. 239-248, 1997.
- [38] R.N.D.K. Muthuri and J. N. Arasa, "Gender differences in self-concept among a sample of students of the United States International University in Africa," *Ann Behav Sci.*, vol. 3, no. 2, p. 1 – 11, 2017.
- [39] C.J. Sowa and N.K. LaFleur, "Gender differences within test anxiety," *Journal of Instructional Psychology*, vol. 13, no. 2, pp. 75-80, 1986.
- [40] R.A. Paul, "Why is depression more prevalent in women?," *Journal of Psychiatry & Neuroscience*, vol. 40, no. 4, p. 219–221, 2015.
- [41] R. Kauser and M. Pinquart, "Gender differences in the associations between perceived parenting styles and juvenile delinquency in Pakistan," *Pakistan Journal of Psychological Research*, vol. 31, no. 2, pp. 549-568, 2016.
- [42] S. Brand, M. Gerber, J. Beck, N. Kalak, M. Hatzinger, U. Puhse and E. Holsboer-Trachsler, "Perceived parenting styles differ between genders but not between elite athletes and controls," *Adolesc. Health Med. Ther.*, vol. 2, p. 9–14, 2011.
- [43] K. Rukhsana and S. Nadia, "Gender Differences in Perceived Parenting styles and Socio-Emotional Adjustment of Adolescents," *Pakistani Journal of Psychological Research*, vol. 23, no. 3-4, p. 93 – 105, 2008.
- [44] Y. Lin and R. E. Billingham, "Relationship between Parenting Styles and Gender Role Identity in College Students," *Psychological Reports*, vol. 114, no. 1, pp. 250-271, 2014.
- [45] L. Ji, T. Yali, C. Zhenyao, Z. Hong and W. Xinran, "Journal of World Business," vol. 48, no. 1, pp. 13-19, 2013.
- [46] S. Saxena and H. Shah, "Effect of organizational culture on creating learned helplessness Attributions in R&D professionals: A canonical correlation analysis," *Vikalpa: The Journal for Decision Makers*, vol. 33, pp. 25-45, 2008.
- [47] K. Shilpa and S. J. Manohar, "Organizational cultural factors leading to learned helplessness in service industry in Bangalore - An empirical study," *Sahyadri Journal of Management*, vol. 1, no. 1, p. 65 – 83, 2017.
- [48] D.S. Hiroto, "Locus of control and learned-helplessness," *Journal of Experimental Psychology*, vol. 102, pp. 187-193, 1974.
- [49] V. Kovess-Masfety, M. I. Pitrou, C. Fermanian, T. Shojaei, C. C. Chee, A. Siddiqi and M. Beiser, "Differential impact of parental region of birth on negative parenting behavior and its effects on child mental health: Results from a large sample of 6 to 11 year old school children in France," *BMC Psychiatry*, vol. 16, pp. 2-11, 2016.
- [50] N. Shedenova and A. Beimisheva, "Social and Economic Status of Urban and Rural Households in Kazakhstan," *Procedia - Social and Behavioral Sciences*, vol. 82, no. 3, pp. 585-591, 2013.
- [51] A.G. Rosanneke, M.M. Emmen, M. Judi, M. H. v. IJzendoorn, M.J.L. Prevoe and Y. Nihal, "Journal of Family Psychology," vol. 27, no. 6, p. 896 –904, 2013.
- [52] L.Y. Chiew, "A study of relationship between parenting styles and self-esteem: Self-esteem's indicator- parenting styles. Unpublished bachelor's degree project. Universiti Tunku (Tunku University) Abdul Rahman," 2011. [Online]. Available: <http://eprints.utar.edu.my/278/1/PY-2011-0802154.pdf>.
- [53] T. Qazi, "Parenting style, locus of control and self-efficacy: a correlational study," *Revista Costarricense de Psicología (Costa Rican Journal of Psychology)*, vol. 28, no. 41-42, pp. 75-84, 2009.
- [54] J. M. A. M. Janssens, "Authoritarian child rearing, parental locus of control, and the child's behaviour style," *International Journal of Behavioral Development*, vol. 17, no. 3, pp. 485-501, 1994.
- [55] G. Rubinstein, "Locus of control and helplessness: Gender differences among bereaved parents," *Death Studies*, vol. 28, no. 3, pp. 211-223, 2004.
- [56] L. Steinberg, S. D. Lamborn, S. M. Dornbusch and N. Darling, "Impact of parenting practices on adolescent achievement: Authoritative parenting, school involvement, and encouragement to succeed," *Child Development*, vol. 63, pp. 1266-1281, 1992.
- [57] G.S. Ginsburg and P. Bronstein, "Family factors related to children's intrinsic/ extrinsic motivational orientation and academic performance," *Child Development*, vol. 64, pp. 1461-1474, 1993.

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