Mental Health of Students with Dyslexia in Relation to Mindfulness

Prof. Ram Mehar* **Himani****

ABSTRACT

The present study investigates the mental health of students with Dyslexia in relation to Mindfulness. The study used descriptive survey method. The purposive sampling technique was administered to select sample of 80 students from Government and Private School of Chandigarh. The teacher referral form was used for diagnosing students who may be dyslexic. Out of which 50 (25 boys & 25 girls) students were selected with dyslexia and 30 students were taken out without dyslexia. The study was conducted on 50 students from which 45 students of Government and 05 students from private schools of Chandigarh. The data was collected from four Governments and Private School students of Chandigarh. The Mental Health Battery by Singh and Gupta (2000) and Mindfulness Attention Awareness Scale by Brown and Ryan (2003) were employed for data collection. The data obtained were analyzed statistically with the help of Mean, SD, t-ratio and correlation was used to arrive at the following conclusions: (i) There is no gender difference on mental health score of students with dyslexia. (ii) There is no gender difference on mindfulness score of students with dyslexia. (iii) There is no significant relationship between mental health and mindfulness among students with dyslexia.

***Keywords**: Mental Health, Dyslexia and Mindfulness*

***Department of Education, CDOE Panjab University, Chandigarh**

****Research Scholar, Department of Education, Panjab University, Chandigarh**

INTRODUCTION

One of the largest issues facing our schools today is mental health. It is estimated that one in five school-aged students (ages 4 to 19) suffer from mental health issues, with children with learning difficulties like dyslexia being more likely to face mental illness (Kessler, Berglund, Demler, Jin, Merikangas & Walters, 2005). Individuals who have dyslexic are more likely to suffer from physical symptoms, anxiety, sadness, and social disengagement (Goldston et al., 2007; Heiervang, Stevenson, Lund & Hugdahl, 2001; Ihbour et al., 2021). In order to help kids with dyslexia overcome the obstacles related to their impairment condition, effective intervention is required; failing to do so will restrict their accomplishments and personal development. Since a problem in the brain's processing leads to dyslexia, the chosen intervention

should target the dyslexic child's brain directly. Meditation has a strong effect on the parts of the brain linked to stress, empathy, and identity (Labier, 2015). According to growing research, mindfulness meditation is one of such technique that engages several facets of mental processes and makes use of numerous closely interconnected brain networks (Tang, Holzel & Posner, 2015). According to the 2016 National Mental Health Survey, the overall prevalence of common mental disorders in India, which includes anxiety and depressive disorders, was 5.1% with an 80.4% treatment gap (Jayasankar, Manjunatha, Rao, Gururaj, Varghes & Benegal, 2022). Unknown causes, unequal treatment delivery, stigmatization, and sadness are a few reasons of undiagnosed and untreated mental health disorders in India (Mathias, Goicolea, Kermode, Singh, Shidhaye & San Sebastian, 2015).

The World Health Organization (2018) describes mental health as a state of psychological well-being which enables a person to handle life's typical pressures, to work effectively and productively for their society.

Developmental dyslexia, a prevalent reading impairment affecting 5-12% of the population, has been linked to a failure in phonological processing based on language (Lyon, Shaywitz & Shaywitz, 2003). When accurate and fluent word reading develops very incompletely or very challenging, it is clear that the person has dyslexia. It offers a framework for a step-by-step process of teaching-based assessment. Dyslexia is a unique form of severe reading difficulty that continues to puzzle the medical and educational establishments (Mihandoost, Elias, Nor & Mahmud, 2011).

According to the International Dyslexia Association, (2007) the following challenges faced by dyslexics are: (i) Acquiring speech (ii) Recognizing the sounds of the letters (iii) Putting spoken and written words in order (iv) Learning to remember numerical data (v) Enduring and understanding lengthy reading assignments (vi) Spelling (vii) Performing arithmetic calculations correctly.

The term mindfulness, which has its roots in Buddhist philosophy, is a literal translation of the Buddhist term sati, which means "intentness of mind," "wakefulness of mind," and "lucidity of mind" (Davids & Stede, 1959). Emphasizing on the importance of intention, awareness and concentration as essential components of mindfulness. The core practice of

Buddhism is mindfulness meditation, which aims to increase one's level of conscious awareness of the present moment (Nyanaponika, 1998). Jon Kabat-Zinn widely regarded as the father of contemporary mindfulness, established the Stress Reduction Clinic at the University of Massachusetts Medical School. He introduced mindfulness meditation into the field of medicine and provided evidence that mindfulness training can lead to benefits in psychological and physical symptoms as well as favorable modifications in behavior, attitudes, and general health (Keng, Smoski & Robins, 2011).

According to Naik, Harris and Forthun, (2013) mindful awareness has three key features are: (i) *Goal*: Being mindful means using your attention in a deliberate and purposeful manner as opposed to allowing it to wander. (ii) *Presence*: Mindfulness entails paying close attention to and being totally involved in the time at hand (iii) *Acceptance*: A key component that implies the feelings, ideas, and sensations are simply acknowledged as "happening" and tracked until they ultimately pass rather than being assessed as good or bad, pleasant or unpleasant.

NEED AND SIGNIFICANCE

Dyslexia is a problem that is faced by many students of India. Dyslexia is a unique combination of an unexplored talent, preposition, environment influence and unsuccessful learning experience. Statistics in India shows that 10 % of the children in a regular classroom are dyslexic, having difficulty in expressing oneself clearly and fully leads to grave difficulties in schools. This difficulty may also affect mental health, emotions, social relationship, anxiety level and academic performance of the students with dyslexia. In this way, mindfulness helps students with dyslexia to maintain their mental wellness. Mindfulness, those people who are alter and focus about on thoughts, feeling, bodily sensations and surrounding. This study has shown that the mindfulness has a positive outcome. This may improve academic achievement and awareness about self and surrounding. It may also lead to the development their mental health so that researcher can plan to take up this problem. Stressful life events have been linked to worse academic performance, which is why it is crucial that students learn efficient stress reduction techniques. Stressful childhood experiences also serve as a proceeding to adult stress (Napoli, Krech & Holley, 2005). The mindfulness intervention's effects on children are realistic and

encouraging (Burke, 2010; Harnett & Dawe, 2012). Therefore, the researchers made an attempt to enquire the mental health of students with dyslexia in relation to mindfulness.

OBJECTIVES

1. To compare the between boys and girls of mental health with dyslexia.
2. To compare the between boys and girls of mindfulness with dyslexia.
3. To study the relationship between mental health and mindfulness of the students with dyslexia.

HYPOTHESES

1 There is no significant difference between boys and girls of mental health with dyslexia.

2 There is no significant difference between boys and girls of mindfulness with dyslexia.

3 There is no significant relationship between mental health and mindfulness of total students with dyslexia.

DESIGN AND SAMPLE

The descriptive survey method was used for the conduct of present study. The random sampling technique was used to collect data. The purposive sampling technique was administered to select the sample of 80 students from government and private school of Chandigarh. The teacher referral form was used for diagnosing students who may be dyslexic. Out of which 50 (25 boys & 25 girls) students were selected with dyslexia and 30 students were taken out without dyslexia. The study was conducted on 50 students from which 45 students of government and 05 students from private schools of Chandigarh. The school wise distribution of sample with students of dyslexia are given in table-1

Table-1: The school wise distribution of sample with students of dyslexia

No.	Name of the School	Boys	Girls	Total
1	Ankur Public School, Sector-14, Chandigarh	02	03	05
2	Government Model Senior Secondary School, Sector- 10, Chd.	07	07	14
3	Government Model Senior Secondary School, Sector- 15, Chd.	06	05	11
4	Government Model Senior Secondary School, Sector- 42,Chd.	10	10	20
	Total	25	25	50

Tools Used

1. Standard Progressive Matrices (SPM) by Raven, Raven and Court (2000) were used to measure the level of intelligence.
2. Mental Health Battery by Singh and Gupta (2000) was used.
3. Mindfulness Attention Awareness Scale (MAAS) by Brown and Ryan (2003) to measure the degree of mindfulness.

PROCEDURE OF DATA COLLECTION

Firstly, researcher identified the dyslexic students with the help of teacher's referral form. Secondly, standard progressive matrices (SPM) were used to identify the intelligence level of the students. Thirdly, average or above average intelligence students were then administered the mental health battery (MHB) to know the mental health level of the students. After that investigator administered the mindfulness attention awareness scale (MAAS) to measure the degree of mindfulness. The answer-sheets were scored with the help of scoring key.

ANALYSIS OF DATA AND INTERPRETATION OF THE RESULTS

The statistical techniques such as Mean, SD, Skewness, Kurtosis, t-test and correlation were used for the interpretation of the data. The results are given in table- 2, 3, 4, 5 & 6

Table-2: **A summary of descriptive statistics between boys and girls on mental health scores**

Variables	Boys					Girls				
	N	Mean	SD	Skewness	Kurtosis	N	Mean	SD	Skewness	Kurtosis
Mental Health	25	62.68	10.08	-1.10	2.46	25	67.20	7.40	0.76	-0.08

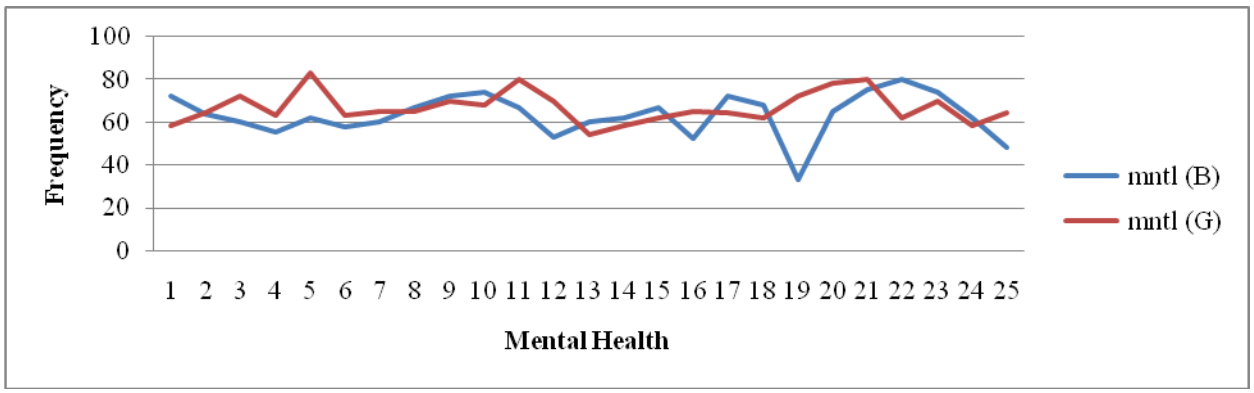

Fig.-1: Showing the comparison between boys and girls scores on mental health

The table-2 and fig.-1 shows that the mean of boys is 62.68 that of girls are 67.20. This shows that the means of both groups were almost equal on mental health. The result indicates that the

standard deviations of mental health of boys are 10.08 as compared to girls is 7.40 which is well distributed. Whereas the value of skewness was -1.10 which were slightly more than zero. So the distribution was slightly negative skewed whereas the value of boys of kurtosis was 2.457 which were more than .263. Hence distribution was slightly platykurtic. So, the distribution can be taken as nearly normal. Whereas the value of girls of skewness was 0.764 which is slightly more than zero so distribution is slightly positive skewed. Kutosis was -0.072 which is less than .263 hence distribution is slightly leptokurtic. So the distribution can be taken as nearly normal.

Analysis of Mental Health between Boys and Girls

The analysis of mental health between boys and girls has been presented in the table-3.

Table-3: **t-ratio between boys and girls of mental health**

Variable	**Boys**			**Girls**			**SE_D**	**t-ratio**
	N	Mean	SD	N	Mean	SD		
Mental Health	25	62.68	10.08	25	67.20	7.40	2.50	1.81

The table-3 shows that the mean scores of mental health of boys are 62.68, which is lower than the corresponding mean score 67.20 of girls. The t-value testing the significance of mean difference of mental health between boys and girls is 1.81, which in comparison to table value ($t_{0.05}$=2.01, df 48) indicated that the difference was not significant even at 0.05 levels. Therefore, the null hypothesis H_1: There is no significant difference between boys and girls on mental health with dyslexia is accepted at both level. The result revealed that there is no gender difference in relation to their scores of mental health. The result indicates that the boys and girls are not significantly different with respect to mental health scores. These studies are supported by the finding of Sun (2022) shows that the relationship between English education and mental health in colleges and universities students had a stable and low negative correlation with the students' personal reasons, school and social environment pressure, and insufficient family support. Sharma and Rani (2014) reveal that social and emotional well-being domains of mental health did not have any significant impact on total personal growth initiative as well as its different aspects. Jimenez, Cadena, Siegel, Shanahan, Garcia and Rodriguez (2011) discovered that there are no appreciable or significant variations in the reading-related cognitive processes of dyslexic men and women. No significant effects of dyslexia on the prevalence of mental health problems (Mattek & Wierzbicki, 1998; Miller, Hynd & Miller, 2005; Riddick, Sterling, Farmer & Morgan, 1999). These studies are contradicted by the finding of Chauhan (2024)

reveals that the students having good mental health were having good academic results as compared to the students with poor Mental Health. The effect of mental health was significantly positive among socio-economically disadvantaged populations, such as among beneficiaries of poverty-alleviation programs (Boyd-Swan, Herbst, Ifcher & Zarghamee, 2016; Shields-Zeeman et al. 2021). Therefore, the researcher found no significant or meaningful gender difference on mental health scores of students with dyslexia.

Table-4: **A summary of descriptive statistics between boys and girls on mindfulness scores**

Variables	Boys					Girls				
	N	Mean	SD	Skewness	Kurtosis	N	Mean	SD	Skewness	Kurtosis
Mindfulness	25	3.13	0.56	-1.11	1.64	25	3.28	0.86	-0.44	-0.098

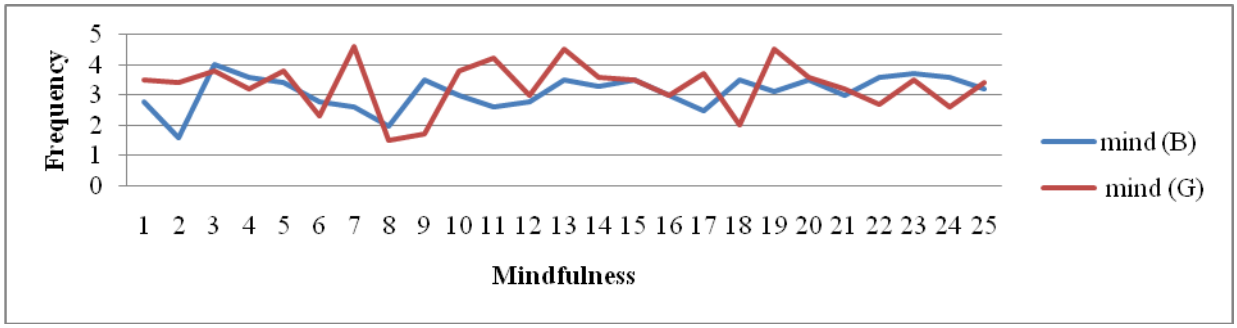

Fig-2: Showing the comparison between boys and girls scores on mindfulness

The table-4 and fig.-2 shows that the mean of mindfulness of boys is 3.13 that of girls are 3.28. This shows that the means of both groups were almost equal on mindfulness. The result indicates that the standard deviations of mindfulness of boys are 0.56 as compared to girls is 0.86 which is well distributed. Whereas the value of skewness was -1.11 which were slightly more than zero. So the distribution was slightly negative skewed whereas the value of boys of kurtosis was 1.64 which was more than 0.098. Hence distribution was slightly platykurtic. So, the distribution can be taken as nearly normal. Whereas the value of girls of skewness was -0.44 which is slightly more than zero so distribution is slightly positive skewed. Kutosis was -0.098 which is less than 1.64 hence distribution is slightly leptokurtic. So the distribution can be taken as nearly normal.

Analysis of Mindfulness between Boys and Girls

The analysis of mindfulness between boys and girls has been presented in the table-5.

Table-5: **t-ratio between boys and girls of mindfulness**

Variable	Boys			Girls			SE_D	t-ratio
	N	Mean	SD	N	Mean	SD		

Mindfulness	25	3.13	0.56	25	3.28	0.86	0.21	0.71

The table-5 shows that the mean scores of mindfulness of boys are 3.13, which is lower than the corresponding mean score 3.28 of girls. The t-value testing the significance of mean difference between the mindfulness of boys and girls is 0.71, which in comparison to table value ($t_{0.05}$=2.01, df 48) was not found significant even at 0.05 levels. Hence, the null hypothesis H_2: There exists no significant difference between boys and girls on mindfulness with dyslexia, is accepted at both level. The result indicates that the boys and girls are not significantly different with respect to mindfulness scores. The finding is supported by the studies of Kaur and Kaur (2023) shows that mindfulness and its facets such as observe, describe and act with awareness were negatively correlated with stress. Pahlevanzadeh and Swathi (2019) reveal that artists have insignificant difference and a high level of mindfulness and self-actualization than non-artists. For mindfulness the difference was not significant. Larson, Gray, Clayson, Jones and Kirwan, (2013) found no significant differences in reaction times, accuracy or post error slowing on the flanker task between a group that underwent brief mindfulness induction and an active control group. These studies are contradicted by the finding of Zarei and Yarigarravesh, (2024) indicates that the dyslexia students showed improvements in their social interactions and self-esteem after participating in a mindfulness activities. Kashyap and Kaur (2018) indicates that significant improvement in the reading ability of students with dyslexia in the experiment group as compared to the control group, pointing to the effect of Mindfulness based intervention on reading ability. Sartia and Kaur (2017) shows that the planning and self-regulation abilities of dyslexic students had been greatly enhanced by the mindfulness approach. Mindfulness is one such intervention which can improve the meta-cognitive skills such as planning and self-regulation of the children (Evans, Baer & Segerstrom, 2009; Flook et al, 2010; Razza, Bergen-Cico & Raymond, 2015). Therefore, the researcher found no significant gender difference on mindfulness scores of student with dyslexia.

Relationship between Mental Health and Mindfulness of Total Students

The analysis of relationship between mental health and mindfulness of total students has been presented in table-6.

Table-5: Correlation between mental health and mindfulness of total students

Variables	**N**	**'r'**
Mental Health and Mindfulness	50	0.12

(Critical Values 0.195 at 0.05 levels and 0.254 at 0.01 levels, df 48)

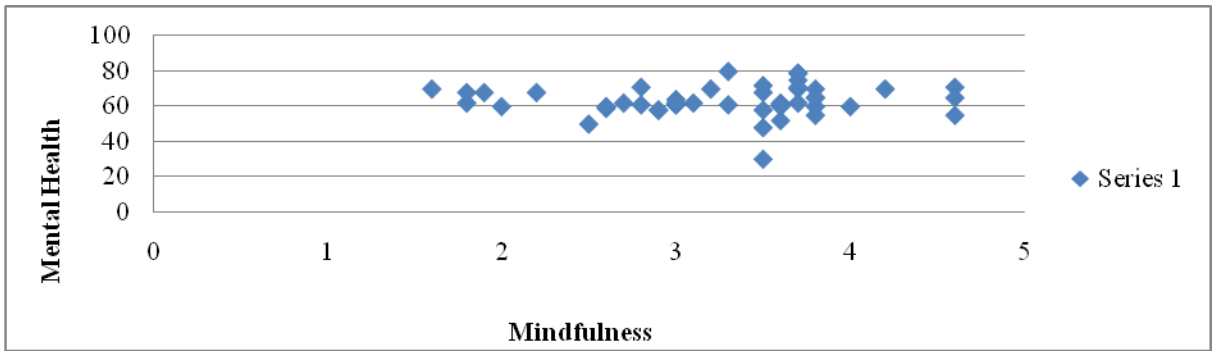

Fig.-3: showing correlation between mental health and mindfulness of total students

The table-6 and fig.-3 shows that the correlation between mental health and mindfulness of total sample is 0.12 which in comparison to the table value was not found significant even at 0.05 levels. So, the null hypothesis, H_3: There exists no significant relationship between mental health and mindfulness of total students with dyslexia, is accepted at both level. The result indicates that there is no relationship exists between mental health and mindfulness of total students. The finding is supported by the studies of Yuan, Sun, Zhao, Liu, and Liang, (2023) shows that there was no correlation between mindfulness and mental health throughout the closed-loop management era. These studies are contradicted by the finding of Zhao et al. (2024) reveals the positive impact of mindfulness and psychological capital in improving mental health of breast cancer patients. Remskar, Western, Maynard and Ainsworth (2022) reveal that physical activity and mindfulness are most effective at lifting mood and improving health and wellbeing. Masuda, Anderson and Sheehan (2009) shows that mindfulness is a major forecaster of characteristics connected with mental health in stressful and mental illness. Therefore, the researcher found no significant relationship between mental health and mindfulness among the total students with dyslexia.

FINDINGS

1. There exists no significant gender difference on mental health among students with dyslexia.
2. There exists no significant gender difference on mindfulness of students with dyslexia.
3. There exists no significant relationship between mental health and mindfulness among total students with dyslexia.

EDUCATIONAL IMPLICATIONS

1. This study will help the teacher to formulate teaching strategies and programmes keeping in mind the mental health in relation to dyslexia students.
2. It will help school authorities aware that a sustainable, positive mental health fosters student's development.
3. Positive mental health needs to be created and sustained by the students, parents and school personnel groups in school.
4. The teacher can tear pages from work books and materials to present small assignment to students who are anxious about the amount of work to be done. This technique prevents students from examining an entire workbook, text or material and becoming discouraged by the amount of work.
5. Assistive technology products such as tablets, electronic readers/dictionaries/spellers, text to speech programmes, audio books and more can be very useful tools.

REFERENCES

Boyd-Swan, C., Herbst, C. M., Ifcher, J., & Zarghamee, H. (2016). The earned income tax credit, mental health, and happiness. *Journal of Economic Behavior and Organization*, 126, 18–38. Retrieved July 24, 2024 from https://doi.org/10.1016/j.jebo.2015.11.004

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology, 84*(4), 822–848.

Burke, C. A. (2010). Mindfulness-based approaches with children and adolescents: A preliminary review of current research in an emergent field. *Journal of Child and Family Studies*, *19*(2), 133-144.

Chauhan, G. (2024). Effect of mental health on academic achievement of the students. *Journal of Emerging Technologies and Innovative Research*, *11*(1), 41-47.

Davids, T. W. R., & Stede, W. (1959). *The Pali text society's Pali-English dictionary* (Eds).. London: Luzac & Company Ltd.

Evans, D. R., Baer, R. A., & Segerstrom, S. C. (2009). The effects of mindfulness and self-consciousness on persistence. *Personality and Individual Differences*, *47*(4), 379-382.

Flook, L., Smalley, S. L., Kitil, M. J., Galla, B. M., Kaiser-Greenland, S., Locke, J., …. & Kasari, C. (2010). Effects of mindful awareness practices on executive functions in elementary school children. *Journal of Applied School Psychology*, *26*(1), 70-95.

Goldston, D. B., Walsh, A. K., Arnold, E. M., Reboussin, B. A., Daniel, S. S., Erkanli, A., ….& Wood, F. B. (2007). Reading problems, psychiatric disorders and functional impairment from mid- to late adolescence. *Journal of the American Academy of Child and Adolescent Psychiatry, 46*(1), 25–32.

Harnett, P. H., & Dawe, S. (2012). The contribution of mindfulness based therapies for children and families and proposed conceptual integration. *Child and Adolescent Mental Health*, *17*(4), 195-208.

Heiervang, E., Stevenson, J., Lund, A., & Hugdahl, K. (2001). Behaviour problems in children with dyslexia. *Nordic Journal of Psychiatry, 55*(4), 251–256.

Ihbour, S., Anarghou, H., Boulhana, A., Najimi, M., & Chigr, F. (2021). Mental health among students with neurodevelopment disorders: Case of dyslexic children and adolescents. *Dementia and Neuropsychologia, 15*(4), 533–540.

International Dsylexia Association (2002). *Dyslexia*. Retrieved March 25, 2024 from https://dyslexiaida.org/definition-of-dyslexia/

International Dyslexia Association (2007). *Dyslexia in the classroom: What Every teacher needs to know.* Retrieved March 25, 2024 from www.interdys.org

Jayasankar, P., Manjunatha, N., Rao, G. N., Gururaj, G., Varghese, M., & Benegal, V. (2022). Epidemiology of common mental disorders: Results from national mental health survey of India, 2016. *Indian Journal of Psychiatry*, *64*(1), 13-19.

Jimenez, J. E., Cadena, C. G. D. L., Siegel, L. S., Shanahan, I. O., Garcia, E., & Rodríguez, C. (2011). Gender ratio and cognitive profiles in dyslexia: A cross-national study. *Reading and Writing*, *24*(7), 729-747.

Kashyap, D., & Kaur, K. (2018). Effect of mindfulness on reading ability of students with dyslexia. *International Journal of Research and Analytical Reviews, 5*(4), 43-56.

Kaur, J., & Kaur, K. (2023). Mindfulness and the level of stress among college students. *Humanities and Social Science Studies*, *12*(2), 69-74.

Keng, S. L., Smoski, M. J., & Robins, C. J. (2011). Effects of mindfulness on psychological health: A review of empirical studies. *Clinical Psychology Review, 31*(6), 1041–1056.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Life time prevalence and age of onset distributions of DSM–IV disorders in the national comorbidity survey replication. *Archives of General Psychiatry, 62*(6), 593-602.

Kirk, S. A. (1962). Educating exceptional children. Boston: Houghton Mifflin.

Labier, D. (2015). *How meditation changes the structure of your brain*. Retrieved March 16, 2024 fromhttps://www.psychologytoday.com/us/blog/the-new-resilience/201502/how-meditation-changes-thestructure-your-brain.

Larson, M. J., Gray, A. C., Clayson, P. E., Jones, R., & Kirwan, C. B. (2013). What are the influences of orthogonally-manipulated valence and arousal on performance monitoring processes. The effects of affective state. *International Journal Psychophysiology, 87*(3), 327–339.

Lyon, G. R., Shaywitz, S., & Shaywitz, B. (2003). Defining dyslexia, comorbidity, teachers knowledge of language and reading. *Annals of Dyslexia, 53*(1), 1-14.

Masuda, A., Anderson, P. L., & Sheehan, S. T. (2009). Mindfulness and mental health among African American college students. *Complementary Health Practice Review, 14*(3), 115-127.

Mathias, K., Goicolea, I., Kermode, M., Singh, L., Shidhaye, R., & San-Sebastian, M. (2015). Cross-sectional study of depression and help-seeking in Uttarakhand, North India. *BMJ Open, 5*(11), 1-8.

Mattek, P. W., & Wierzbicki, M. (1998). Cognitive and behavioral correlates of depression in learning-disabled and non learning-disabled adult students. *Journal of Clinical Psychology, 54*(6), 831–837.

Mihandoost, Z., Elias, H., Nor, S., & Mahmud, R. (2011). The effectiveness of the intervention program on reading fluency and reading motivation of students with dyslexia. *Asian Social Science, 7*(3), 187-199.

Miller, C. J., Hynd, G. W., & Miller, S. R. (2005). Children with dyslexia: Not necessarily at risk for elevated internalizing symptoms. *Reading and Writing, 18*(5), 425–436.

Murthy, R. S. (2017). National mental health survey of India 2015-2016. *Indian Journal of Psychiatry, 59*(1), 21-26.

Naik, P., Harris, V., & Forthun, L. (2013). Mindfulness: An introduction. *Edis*. Retrieved March 17, 2024 from http://edis.ifas.ufl.edu

Napoli, M., Krech, P. R., & Holley, L. C. (2005). Mindfulness training for elementary school students: The attention academy. *Journal of Applied School Psychology*, *21*(1), 99-125.

Nyanaponika, T. (1998). *Abhidhamma studies: Buddhist explorations of consciousness and time* (4th ed.). Boston, MA: Wisdom Publications.

Pahlevanzadeh E., & Swathi P (2019). Mindfulness and self-actualization among artists and non-artists in India. *International Journal of Indian Psychology, 7*(2), 304-314.

Raven, J., Raven, J. C., & Court, J. H. (2000). *Standard progressive matrices test.* New Delhi: Manasayan.

Razza, R. A., Bergen-Cico, D., & Raymond, K. (2015). Enhancing pre-schoolers self-regulation via mindful yoga. *Journal of Child and Family Studies, 24*(2), 372–385.

Remskar, M., Western, M. J., Maynard, O. M., & Ainsworth, B. (2022). Exercising body but not mind: A qualitative exploration of attitudes to combining physical activity and mindfulness practice for mental health promotion. *Frontiers in Psychology*, *13*, 1-13. Retrieved June 24, 2024 from https://doi.org/10.3389/fpsyg.2022.984232

Riddick, B., Sterling, C., Farmer, M., & Morgan, S. (1999). Self-esteem and anxiety in the educational histories of adult dyslexic students. *Dyslexia, 5*(4), 227–248.

Sartia & Kaur, K. (2017). Effect of mindfulness training on planning and self-regulation skills among students with dyslexia. *International Education and Research Journal, 3*(5), 634- 636.

Sharma, H. L., & Rani, R. (2014). Impact of mental health on personal growth initiative among university postgraduates. *Research on Humanities and Social Sciences, 4*(3), 134-147.

Shields-Zeeman, L., Daniel F. C., Batra, A., & Hamad, R. (2021). How does income affect mental health and health behaviours? A quasi-experimental study of the earned income tax credit. *Journal of Epidemiology and Community Health, 75*(10), 929–35.

Singh A. K., & Gupta, A. (2000). *Manual for mental health battery*. Lucknow: Ankur Psychological Association.

Sun, Y. (2022). The effect of mental health intervention before English test on college students' english test scores. *Occupational Therapy International*, 1-10. Retrieved June 24, 2024 from https://doi.org/10.1155/2022/4998180

Tang, Y. Y., Holzel, B. K., & Posner, M. I. (2015). The neuroscience of mindfulness meditation. *Nature Reviews Neuroscience*, *16*(4), 213-225.

Wolman, B. B. (1973). *Call no man normal*. New York: International Universities Press.

World Health Organization (2018). *Mental health: Strengthening our response*. Retrieved March 9, 2024 from http://www.who.int/mediacentre/factsheets/fs220/en/.

Yuan, J., Sun, F., Zhao, X., Liu, Z., & Liang, Q. (2023). The relationship between mindfulness and mental health among Chinese college students during the closed-loop management of the COVID-19 pandemic: A moderated mediation model. *Journal of Affective Disorders*, *327*(3), 137-144.

Zarei, F. & Yarigarravesh, M. (2024). Effectiveness of mindfulness on self-esteem and social interactions of students with dyslexia. *Journal of Learning Disabilities, 13*(2), 18-31.

Zhao, D., Li, Y., Zhou, M., Wang, Q., Li, G., Qi, M.,... & Li, P. (2024). The effect of mindfulness and psychological capital on mental health of breast cancer patients: Based on polynomial regression and response surface analysis. *Journal of Psychosocial Oncology*, *42*(2), 190-207.