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Case Study

A Case Study Exploring Pre-Service Teachers' Programming Difficulties and Strategies when Learning Programming Languages

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ABSTRACT

Understanding the importance of training young people, this study sought to explore the early experience of pre-service teachers in their computational practices in terms of the difficulties they faced and the strategies they used while learning how to program. Based on convenience sampling, four participants were recruited from an undergraduate course focusing on computer science education in K-12. The literature on novice programmers' difficulties and their strategies was used to establish the conceptual background for this study. We collected four semi-structured interviews with pre-service teachers, a total of five hour-long classroom observations, and 19 class activities (archival data). After conducting a content analysis, findings showed four categories in which pre-service teachers face difficulties: (a) understanding the computational concepts (semantic); (b) using the concepts inappropriately (syntax); (c) developing a program (algorithmic thinking), and (d) identifying problems (debugging). We also found five categories in which pre-service teachers overcome their difficulties: planning, using resources, seeking support, guessing and checking, and looking for visual assistance. This study emphasized that pre-service teachers encounter several difficulties in learning computational concepts through programming languages, which should be considered in pre-service teacher education.

Keywords

Computational Thinking; Computer science education; Pre-service teachers; Problem solving strategies.

INTRODUCTION

Computational thinking (CT) is defined as the ability to formulate a solution to a problem by breaking the problem down so that the solution can be automated.¹ Since Wing¹ highlighted the importance of CT for young people and suggested the benefits from using it in diverse contexts, there has been a tendency toward teaching and learning CT concepts (e.g., abstraction, decomposition, and debugging) in K-12.² This training of the young generation in the context of CT has been supported due to the need for people with CT skills in the diverse contexts of the modern economy in the United States (US).^{3,4}

In recent years, research on theoretical and practical com-

puter science (CS) education in K-12 has focused on defining CT concepts and providing a framework to integrate those concepts into instruction.^{5,6} Gal-Ezer and Stephenson⁷ suggested that teachers should have a sufficient conceptual understanding of the CT concepts. With such goal in mind, National Science Foundation (NSF) trained over 10,000 computer science teachers which was a significant effort made in the last decade.⁵ In addition, researchers have also recognized the importance of spreading such training efforts of CT concepts on the development of pre-service teachers.⁸⁻¹⁰

Previous studies showed that there are some challenges faced by students of various age groups in learning CT concepts. For example, Basu et al¹¹ studied the computational and science

domain-related challenges of 15 sixth grade students. The author's identified six categories of difficulties faced by sixth graders when learning programming. These difficulties included (a) understanding basic programming concepts (semantic difficulties); (b) using programming concepts, such as manipulating various kinds of loops; (c) developing a solution to a given computational problem step-by-step (algorithmic thinking); (d) adapting a part of an existing code to one's own code; (e) breaking the task into smaller tasks and handling these smaller tasks independently from the rest of the code; (f) detecting causes (also known as bugs) that keep the code from working properly.

Similarly, researchers identified some challenges for students in different age groups. For example, Saeli et al¹² identified various difficulty high school students encountered while learning to program, including difficulty to instruct a computer to carry out a solution, faulty assumption that a computer can understand their solutions, and tendency to have a limited point of view, which resulted in failure to find a suitable solution. The author also found that creating instructions for a computer to solve a given problem was a challenging task for high school students.¹² This challenge was also confirmed in a different study with novice programmers that the participants had difficulties while creating a computer program even though they a clear understanding of concepts (semantic) and an understanding of how to use the concepts (syntax).¹³ Supporting the same idea, Lahtinen, Ala-Mutka, and Järvinen,¹⁴ in an analysis of a survey of 559 university students and 34 teachers, indicated that students had difficulties with program construction, such as developing a program to solve a given task or dealing with bugs.

On the other hand, the literature on computer science education indicated that there were several methods that students used to overcome their difficulties in learning programming. For example, Lahtinen et al¹⁴ identified several sources that students from different universities use to receive help while learning programming including: a programming course book, lecture notes, exercise questions and examples, example programs, pictures of programming structures, and interactive visualizations. The authors found that students perceived example programs as the most helpful for solving problems. In addition, a number of studies emphasized that visual elements help students develop a clear understanding of programs.^{15,16} Similarly, several research studies indicated that providing students with a scaffolding from peers or instructors could be helpful for them to overcome their difficulties.^{11,17}

Addressing students' difficulties from teachers' perspectives, several teaching techniques that help students overcome the difficulties they face while learning programming.¹² For example, algorithmic thinking defined as "a series of ordered steps"¹⁷ to follow while solving a problem and learning a simple programming language could help students overcome their programming difficulties.

METHOD

The purpose of this qualitative study was to explore pre-service

teachers' difficulties and strategies while learning programming languages. A "basic" qualitative research design¹⁸ was used to understand how pre-service teachers interpreted their experiences with programming languages. Two research questions were posed to guide this study:

- What difficulties do pre-service teachers face when learning computational concepts through programming?
- What strategies do pre-service teachers use to overcome the difficulties they face while learning computational concepts through programming?

To answer the two research questions, we collected data from interviews, classroom observations, and archival data. Using a content analysis, we analyzed the data.

Participants

This study took place in a computer science education class at a large mid-western state university. Four participants were selected through convenience sampling.¹⁸ Between February 15, 2017 and March 22, 2017, we collected five hours of observations, four semi-structured interviews, and archival data.

All four participants were female elementary education majors with a concentration in science and the computer education license (CEL) program. They were in their junior year and completed two computer education courses in the CEL program before taking the current introductory course to programming languages.

In this study, pre-service teachers learned two programming languages: Scratch (block-based programming) and Python (text-based programming). Scratch, with dragging and dropping features, allowed students to easily program without prior knowledge¹⁹ and learn CT concepts without making syntax errors.⁵

Observations

A total of five hour-long observations took place at different class times. During the observation process, 12 pre-service teachers were observed while engaged in CT problem-solving practices, which involved solving problems, such as "Write a function that takes two numbers and returns True if the first number is bigger than the second one," within a certain time limit. The researcher took field notes during pre-service teachers' CT problem-solving practices. For example, pre-service teachers were raising questions related to the meaning of concepts. One of them asked the instructor: "why do you use two equal signs instead of one equal sign here [in If condition]?" The researcher also observed that pre-service teachers worked with peers collaboratively to solve the given problems.

Interviews

Semi-structured interviews were conducted with four pre-service teachers from the classroom of observation. An individual email was sent to each of twelve participant's in the computer science education class, of whom four participants volunteered to participate

in the study. The interview questions focused on the participants' experiences and their thought process of solving a given problem. To ensure the clarity of the interview questions, interview questions were sent to each participant in advance. Each interview took roughly 30-minutes. With permission from the participants, three interviews were audio-recorded and transcribed for data analysis.

Archival Data

Through class activities, nineteen worksheets were collected from students. These class activities reflected students' initial thinking processes as they worked in pairs or small groups to develop their solutions on their worksheets before attempting to solve a given problem using either Scratch or Python programming platforms. In this process, the instructor asked students to think about how they would solve the given problem, to develop their thinking processes step-by-step, and to write down their solutions on their worksheets.

Data Analysis

After transcribing the interviews, we sent the interview data to the participants for member checking to ensure the validity of the data. Two of the participants responded that their transcribed data were accurate and that they did not want to change anything. To analyze these transcripts, researchers used a content analysis approach.²⁰ Two coders used the participants' own words to code during the initial analysis of the interview data. After the initial coding process, researchers reached out to the sub-categories. Finally, they identified the categories for each sub-category.

In addition, researchers analyzed observation data and archival data for triangulation purposes to ensure the validity of the results.²⁰ Researchers followed the same procedure to analyze observational data as in the interview data analysis. To analyze the archival data, researchers looked at how CT concepts were used in class activities. The results of the archival data analysis and observation analysis supported the categories identified in the interview data analysis. There were no emerging categories that we identified from the analysis of observation data and archival data.

RESULTS

After the data analysis process, two themes including programming difficulties and strategies had been identified. The first theme, difficulties, involved four categories that pre-service teachers experienced while learning CT concepts through Scratch and Python programming languages. The second theme involved five categories that pre-service teachers used to overcome their difficulties in the learning process.

Difficulties

In answering to the first research question concerning the difficulties pre-service teachers faced while learning how to solve a given problem in Scratch and Python programming, researchers identified four categories of difficulties as follows:

Understanding the computational concepts (semantic): The participants in this study indicated a lack of understanding the computational concepts. The difficulties they faced were mainly related to the meaning of concepts and how to apply them. For example, one participant complained about the difficulties of using a computational concept appropriately and she stated that she developed an excessively long code but failed to make it shorter by using the concept loop (repetition). In the archival data analysis, the same failure of pre-service teachers where they lacked understanding of the concept loop was found. For instance, the instructor asked them to develop an algorithm for when the green flag in Scratch was clicked; the timer will count backward from 5 to 0 one by one. More than half of the students failed to say "repeat 5 times" to count down.

Similarly, one pre-service teacher was having difficulties in understanding how to use nested conditions which was another CT concept where students needed to use a conditional statement inside of another conditional statement. The archival data analysis also captured the same instance of difficulty. Three out of five groups did not understand the use of nested conditions.

Another example related to semantic difficulties was that students failed to understand why they were using particular concepts. The following statement captured the difficulties that students were experiencing:

"I just want to know that there is a deeper understanding of why you put two equal signs or why I, like certain things are in quotation marks and some aren't."

Using the concepts appropriately (syntax): The analysis of interview transcripts showed that pre-service teachers sometimes had syntax errors in their code. They gave two main reasons for why they were having syntax related difficulties. First, they sometimes did not know the appropriate format for using concepts. Second, even if they knew how to use a certain concept, they failed to express it correctly. For example, one student explained her struggle with using a colon in Python programming:

"I can write out my ideas if there's not... like I forget one colon and it like messes up the whole program because if you don't have a colon then it's not going to run properly..."

In many cases, the students' failures in Python programming were related to syntax errors such as a missing comma or parenthesis.

Identifying problems (debugging): Another difficulty that pre-service teachers faced was to identify and fix the problems that caused errors. For example, one student stated that she was having difficulty figuring out the problems in her code. One described that:

"I made another game where... I had four fish that were falling and two fish kept getting stuck at the bottom of the screen... I have no idea why those two are just getting stuck..."

They often did not figure out the error messages that the python editing tool provided. The observation data suggested that it happened when pre-service teachers could not pinpoint the area of or reason for the error and examined the entire syntax instead.

Developing a program: Even though students knew what concepts they needed to use (semantic) and how to use them (syntax), they failed to combine the codes while developing a program. For example, one participant described how hard it was to transfer what she thought of as a solution to a working program:

“I understand the whole programming thing, but like -- my basic difficulty is like using their language for it (assembling a program).”

To ensure her intentions, a researcher asked what she meant by “understanding the whole programming.” She explained that:

“Just like understanding all of the different controls that they have and like what each thing, like different control, is used for, what its purposes...”

Strategies

To answer the second question which is about strategies that pre-service teachers used to overcome their programming difficulties, researchers identified the following five categories:

Planning: The pre-service teachers exhibited similar approaches to solving the difficulties they faced in using the programming platforms. For example, one indicated that she planned how to solve a given problem step-by-step before she actually attempted to use the programming platform.

Similarly, using worksheets was a part of the planning process in which one of the participants from the interview shared her experience that:

“He [the instructor gave us] the chart paper and he'll be like write out your steps..., and it's not in like coding language like we're writing in like English and math...”

Resource use: Pre-service teachers were frequently using resources (e.g., textbooks, similar codes, and class notes) as a strategy to overcome their difficulties. Such use of resources especially occurred when they were working alone. For example, one participant talked about how she used example codes as her strategy:

“One strategy is when I am working on my own myself as I pull out those examples [codes] that we've done in class and kind of compare my code [to see] what I'm missing here...”

Through observing pre-service teachers, researchers also found that they frequently used Google to find answers for their difficulties.

Support: Students often sought support from peers, teaching assis-

tants, and the instructor. They perceived peers' support as the most valuable and the quickest way to overcome the difficulties. When they faced a difficulty, they would help each other. If they could not figure out the problems, they would, as observed in the class, go to the teaching assistants or the instructor to ask for help. One of the pre-service teachers described peer support as:

“Different people in the class understand different things, so like I could help someone with a certain aspect of it and they like understand some other.”

Guess and check: Another strategy was guessing and checking different concepts to overcome their difficulties. If pre-service teachers could not identify the problem, they would try different code blocks in Scratch to solve it. As one of the participants said that:

“Mostly it (way of overcoming my difficulties) was a lot of like guessing and checking to see... if this would solve the problem or not.”

Visualization: The pre-service teachers reported this strategy when being asked about Scratch programming. The Scratch programming platform allows users to see how their block codes work, which is an intended design principle of visual coding. Another pre-service teacher stated that she observed the results of her codes in Scratch to detect where her block codes failed to run properly.

Summary

The findings of this study indicated that pre-service teachers encountered different difficulties while learning to program. These difficulties were: understanding CT concepts, using CT concepts, identifying the problem, and developing a program. In addition, pre-service teachers used several strategies to overcome their difficulties including planning the solution, using resources, receiving support from peers or the instructor, guessing and checking, and using visualization.

DISCUSSION

This case study was conducted to explore the challenges pre-service teachers encountered while learning programming languages and the strategies they used to overcome their difficulties. We found that pre-service teachers struggled in the process of learning computational concepts through using programming languages. This was not an unexpected experience of learners of programming languages. As different researchers shared similar findings, learners, including pre-service teachers, might have a lack of understanding of how to use computational concepts or when they might need to use those concepts.^{11,21} Since such difficulties of learners are likely to occur in teaching computational concepts using a programming language, instructor's choice of instructional strategy with a careful consideration of different learner's need gains a higher importance. Van Merriënboer and Paas's²² emphasis on the importance of practicing the concepts while learning how to program is still noteworthy for students and teachers as the findings of this study suggest.

The findings of this case study confirms the previous literature on the difficulties of learning computational concepts and learning how to program by using two programming languages such as dealing with syntax errors^{11,14} and the struggle of initiating how to program.^{13,14} However, this study contributed to the literature by identifying the difficulties of preservice teachers who were learning to teach computational concepts by using programming languages. Because of the design of this learning process, pre-service teachers used two programming languages and we were able to draw a conclusion that pre-service teachers had to pay more attention on the details such as syntax while using Python; whereas they can focus on the use of the concepts when they were solving the given task with Scratch. Several studies also confirmed that learners might have more difficulties with Python while identifying what prevents their code from running appropriately.^{11,13} Therefore, the instructor who teach the text programming languages should pay more attention on practicing the use of concepts with the intended programming language.²²

In addition, we identified that pre-service teachers used a variety of strategies such as worked examples to overcome the difficulties they faced in solving computational problems. Even though the literature suggested similar strategy uses of novice programmers,^{10,11,15-17} we identified that pre-service teachers learned these strategies from the instructor or peers during the process of solving computational problems. Therefore, it would be more beneficial to learners if they were informed by the instructors in terms of what kind of difficulties they might face during the learning process, as well as the possible uses of problem solving strategies.

Implications for Research and Practice

The findings of this study encompassed several implications for both future research and practice. First, one should replicate the current study with a large number of participants and focus on one aspect of programming difficulties, such as semantic. Furthermore, future studies should examine the gender differences in programming difficulties. Regarding the implications for practice, instructors should guide students in terms of how to use strategies and give them more time to practice. Based on the difficulty, instructors can provide tailored support accordingly.

LIMITATIONS

In this study, there were several limitations that should be addressed. First, all participants were female recruited by the convenience sampling. The sample size is too small to invoke any meaningful statistical test results. In addition, archival data were not fully comprehensive to support the interview and observation data in terms of triangulation purposes.

CONCLUSION

The study suggests that pre-service teachers learning computational concepts through programming languages encountered several difficulties including: a lack of understanding the computational

concepts (semantic), using the concepts inappropriately (syntax), developing a program, and identifying problems (debugging). They have also indicated several strategies they used to overcome their problems including planning the solution, using resources, receiving support, and using visualization. These findings suggest-instructors should include more practice to provide students with a clear understanding of the computational concepts and guidance in terms of how learners should overcome their difficulties.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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Short Communication

Looking Back, Moving Forward: Reflection on Race and Racism

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ABSTRACT

This paper addresses the history of racism, its manifestation and its impact. It recognises that racism is both interpersonal and structural. It is embedded in the way society and organisations are structured, through policies and practices that disadvantage black people. It is important now to work towards racial justice for the sake of a better and shared future.

Keywords

Racism; Race; Black lives matter; Psychotherapy; Belonging; Identity and black identity; Internalised racism; White racism.

INTRODUCTION

Given the current economic climate, it seems we need to be thinking about how to make reparations and restore equilibrium regarding the politics of race and racism. Sustaining of a system of inequality has its benefits to those who uphold it. The oppressed can no longer remain oppressed and an acknowledgement of the empty category of colour that has benefited the west has to be acknowledged in order to begin the process of healing for those affected. Decision-makers maintain systemic racism, and systemic inequalities affect the economic, social, health and educational sectors, and maintain a system which effects disadvantages to Blacks, Asians, and other minority ethnicities. (BAME). This is a system that keeps some on the poverty line. As a result they are unable to get what they need and incapable of enjoying privileges, such as access to healthy food choices, education, healthcare, housing and employment. There is a body of evidence that shows that racism can lead to mental illness such as depression, experience of hallucinations and delusions. Evidence also confirms that BAMEs die at disproportionately higher rate when compared to white people as a result of inequalities. They however, continue to be pathologized and medical 'experts' continue to propose various biological (and even genetic) 'explanations' for this pattern.¹

The problem of racism is that it is at times hidden and at times overt. The reality is that the impact of day-to-day racism,

discrimination, micro-aggression — designed to control space, energy and mobility, means black people are more prone to stress and anxieties, and as a result and the effect contribute to feeling of degradation, to ill-health and their early mortality.

Baldwin, explains “*that for as long as we can deal with the Negro' as a kind of statistic, or something to be manipulated, to be fled from, or something to be given something to, there is something we can avoid and what is avoided is what he really means to us.*”²

HISTORIC PERSPECTIVE

Black Britain

We need to return to our history in order not to repeat the atrocities of the past and understand how we got it wrong. The history of the transatlantic slave trade is a history of exploitation and oppression, often difficult to read and absorb. It was a bitter struggle of good and evil. The British people have been kept ignorant of the history of this oppression. The Atlantic slave trade was the largest single enforced movement of people in the pre-modern world. Britain came to dominate the trade followed by the Danes, French and Germans. The Abolition of Slavery Act was introduced in the British Empire in 1807. The trade in human lives itself spanned approximately 400-years in Europe and America.³ Even though it has been abolished for over 200-years, the transmission of the trauma

caused is still being experienced today.

Of importance is the ambivalence and lack of transparency of what African Slave trade meant to Britain as a whole. It meant imperial wealth and power as well as contribution to merchant fortunes in London, Bristol and Liverpool. For most of the British nation, and members of parliament, the African slave trade was almost entirely invisible.⁴ There were religious criticisms of the trade, however these were drowned or ignored. 'Profit ensured that morality was silenced'. In Britain, there is a lack of public and official interest in the Africa trade in the 18th century.³

This ambivalence and lack of guilt as to what was going on could only happen because of what is referred to as "Cognitive Dissonance." 'Cognitive dissonance' occurs when a person holds two or more contradictory beliefs, ideas, or values; or participates in an action that goes against one of these three, and experiences psychological stress because of the phenomenon. According to this theory, when two actions or ideas are not psychologically consistent with each other, people do all in their power to change them until they become consistent.⁵ The discomfort is triggered by the person's belief clashing with new information perceived, wherein they try to find a way to resolve the contradiction to reduce their discomfort.⁵

European systematically turned the capturing, shipping and selling of other human beings into a business, a business for the development of an entire economy, providing the foundation for the world's wealthiest nation. The "business" of selling of the slave people, could only happen because they were thought of as less than human. They were no different to other forms of property like horses or cattle. If they are not human, then anything could be done with them. This way of thinking is what led to the subsequent atrocities that resulted. The atrocities were so bad, that some slave people took their own lives.

Worth noting is that the Africans fought against enslavement from the moment of initial capture through the horrors of the slave ships and throughout the daily life on the plantations.³ African slaves were mostly ferried across the seas to work on plantations in the Caribbean and the Americas, others were ferried into the ports of London, Liverpool and Bristol. This was a 'free trade' and it was not uncommon that the slave traders made 100% profit from it. The British coin, the guinea, originated in the African trade of the eighteenth century.

Britain flourished through slavery and capital investment from sugar, tobacco and cotton and by 1750, there was hardly a manufacturing town in England which was not connected with the colonial trade. The profits provided the main streams of capital which financed the industrial revolution. The trade made an enormous contribution to Britain's industrial development.

Although enslaved people moved through the shores of Britain regularly, most worked on plantations in the British colonies, the majority in the Caribbean. Some slave people were brought back to Britain and sold into domestic service working as butlers

and household attendants in aristocratic families. Thousands of people were born into slavery and died enslaved, not knowing what it is to be free. Some of the slaves escaped, they were poor and had to eke out an existence whichever way they could. They attracted attention and sometimes abuse. The impact is that generations of black lives, were stolen, families were torn apart and communities fractured. They encountered brutality and violence and lived in fear forever.

The second wave of black people coming to the UK were post war, as the British government began to encourage mass immigration from the countries of the British Empire and Commonwealth to fill shortages in the labour market. In services such as British Rail, the National Health Service, and London Transport. This was encouraged by the British Nationality Act of 1948, which gave all Commonwealth citizens free entry into Britain. An important landmark in the history of Britain was the ship HMT Empire Windrush from the Kingston Jamaica to Tilbury Essex, in 1948 which brought a group of migrants.⁶ Some were servicemen who took this opportunity to return to Britain, others came for the first time. Most of those who came were young women and men in their early twenties. The men worked in the metal goods, engineering and car manufacturing industries, and in transport and communications, while the women worked in occupations such as nursing and catering.

The British Nationality Act 1948 gave Citizenship of the UK and Colonies to all people living in the United Kingdom and its colonies providing the right of entry and settlement in the United Kingdom. By 1962, all Commonwealth citizens could freely enter the UK to work. By 1984 the black British population in the UK no longer consisted predominantly of immigrants but was mainly UK-born. According to the UK government, there is essentially 3.3% of the population of England and Wales who described themselves as black Caribbean or black African.⁷

Current issues: There remains a fear of "the Other" which takes on many disguises. The worry amongst some white people, is in a perceived disappearance of the essence of what it is to be British which is being eroded by immigrants. 'The fear that anything that doesn't resemble white homogeneity exists only to erase it'.⁸ Could it be that, we are more likely to treat those that are akin to us as similar to us? The word multiculturalism has become "a front word" for fears about black and brown and foreign people posing a danger to British Whites.⁸

Black Brits are represented in all walks of life in the UK and have made major contributions to the arts and sports and entertainment. Day-to-day racism, as well as the intergenerational transmission of slavery and colonisation still exists today. Black people remain trapped in a cycle of poverty because of stigmatisation and discrimination, based on colour difference. This affects their psyche. The stress of coping and continuous exclusion affects their health outcomes: and as a result mortality rates for African/Caribbean are higher in England and Wales, when compared with white people.⁹

Legacy of Slavery and Colonisation

This impact of the intergenerational and transgenerational trauma are not limited to those individuals directly exposed to traumatic events, and often it is the ripple effect which remains and gets passed down to the second and third generations.

One of the most malignant consequences of white projection of denigrated qualities onto a black person is, black people, introject the image of the self they see in the minds of the white person, believing their identity is defined by that image. The black person becomes the racialized object. In other words, s/he is experienced not so much for her or himself, but in terms of what has been projected onto them. This has created dislike of what it is to be black. This results in frustration and anger among black people which cannot be vocalised for fear of being branded as aggressive or violent. The reason for their anger should be clear, yet, it is made out that it is unjustified except for their 'maladaptive nature'. Because the anger cannot be directed towards the perpetrator, gets directed horizontally, against other black people as in the black on black killing in London. Whether black and ethnic people admit it or not, no one is free of racism. As a result, Black people feel acutely disrespected in their everyday lives, and every black person may have felt the sting of disrespect purely based on their skin colour.

Maintenance of Race System

People of colour are now living all over the world. Their skin colour means they stand out, significantly and even though they come from different parts of the world, they are treated as one homogenised group. In Britain, being black and British expresses an impossible duality. This reinforces who belongs and who doesn't and maintains a system of 'them' and 'us.' Black people do not feel they belong nor are they fully accepted, even though most are now second and third generations, born in Britain. Belonging or not belonging raises questions of identity, such as, if I do not belong, then, where do I belong and who am I. One thing the Coronavirus has highlighted is that the immigrants are looked on to do the menial tasks in the UK, but they are on the margins, yet central to the work force, but excluded from the culture.

Whiteness

White people inherited whiteness, and only think about colour when they come in contact with someone of colour. White people by virtue of being white, sees themselves as invincible. Baldwin expressed that 'an unchallenged identity makes a man feel he can do no wrong'.² To consider the impact of racism on the "black other" would mean to consider the impact that white as a race, has had a role in it. This means having an understanding that whiteness is multidimensional. The process and practice include a recognition of the fact that basic rights, values, beliefs, perspectives and experiences pretended to be commonly shared is, in fact, consistently awarded to white people. A recognition of white centeredness and removal of white projection. Shame and guilt need to be removed, for the sake of progress towards racial justice. Many white people

believe their success is the result of their own efforts, ignoring the reality of white privilege and the wealth and riches resulting from slavery. To unpack all of these, and consider it, requires a psychic change. It would mean a power struggle, as there is a need to sustain ignorance and maintain supremacy this is not likely to change anytime soon. The need to maintain the status quo is so great.

In a society that is politically and socially controlled by white people, people with dark skin colour have the hardest time getting ahead.

Survival and Growth—Fighting Despair

There is a call for individuals and nations not to turn away from historical truth and its legacy of pain. The denial of the pain of slavery or the holocaust, turns the generations of those affected to despair and rage, due to its manifestations in our current society. Denial of any genocide cannot remain compartmentalised, as denial bleeds into the fabric of the nation. A reality for black people is that they are so expendable. An attack against a black person feels like an attack against the whole. Take the Stephen Lawrence and more recently George Floyd cases.^{10,11} The lack of response, and long drawn out delays for an injustice, results in the aggrieved being re-traumatised.

The visibility of being black makes black people more vulnerable, however, it is also their greatest strength. It is very important that black people learn to define themselves for and by themselves and strive for self-actualisation, knowing that courage comes from oppression. There is an argument that black people talk a lot about racism, and try to convince and inform the white population of its' importance. This takes them away from attending to themselves. Black people should talk less about racism, if possible, and white people should engage more. Those that have come before have paved the way and made it possible for us, and to them, we owe gratitude.

CONCLUSION

Difference as a Creative Force Necessary for Change

In order to move forward, we need to commit ourselves to a future that can include our differences and similarities and work towards that future with the particular strengths of our individual identities. This is for black and white to co-create. Both black and white people have a shared similarity which surpasses our differences, moving forward, we must allow each other our differences at the same time as recognise our sameness. In order not to repeat horrific events of the past and reduce suffering, we need to be able to revisit and understand the past in order to rectify how we got it wrong and how to rectify the wrong. What prevents us from doing so is crouched in society's differentiation of one group from another. A superior and an inferior race.

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Brief Research Report

How Self-Reflection Influences Use of Cognitive and Analytical Language

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ABSTRACT

Objective

We examined cognitive processes and analytic expression according to emotional prime, hypothesizing that negative affect may increase rumination as seen in analytic language (that is, lead to language of “explaining”), as well as insight and causality, reflecting language focused on specific reasons.

Method

Sixty-four participants were assigned randomly to write about either “*positive aspects of myself*” or “*aspects of myself that I would like to change*”. These narratives about positive and negative characteristics were subjected to the linguistic inquiry and word count (LIWC) in order to examine how the manipulations influenced expression.

Results

More insight and causation in language was seen in participants’ language that focused on positive (rather than negative) aspects of themselves, but more discrepancy was seen when writing about negative qualities. These findings were not a function of wordiness.

Conclusion

Causality and insight were prevalent in language after positive prompting, perhaps because people were providing rationale and support for positive self-talk. Discrepancy suggests counterfactual thought and was common in writing from a negative prompt.

Keywords

Language use; Analytical language; Sex differences in linguistics.

INTRODUCTION

What we say, and how we say it, reflects not only our explicit goals and motivations, but also several internal psychological states. Psychologists have several tools to examine how language signals what we are thinking and feeling. One way to examine language is through an open vocabulary classification system, whereby language is grouped naturally into various categories that show personality traits and psychological states of the speaker.¹ A different way employs the linguistic inquiry and word count (LIWC),² a computer program that distributes both the content of speech, as well as the manner of expression, into predetermined categories. These categories are the result of hundreds of studies

that have included more than 80,000 writers or speakers who have produced over 200 million words in a wide variety of contexts.² The diverse samples include speeches and social media posts, novels and plays, essays and articles, and personal narratives written both spontaneously and under specific directions.

Although most studies using the LIWC have focused on emotion and self-referencing,^{3,4} particularly as these reflect sex and status differences, a smaller number of studies have focused on cognition.^{5,6} Cognitive processes are reflected in both the content of language, as well as its expression. Language content signaling thought, causality, and insight is used in predictable circumstances, such as when people wish to transmit facts or reconstruct events

and provide explanations for them; causality and insight are used to discuss past events, providing construal, reconstruction, and reevaluation.⁷ Cognitive processes are also seen when people use words such as “know” or “because,” yet cognitive markers also include discrepancy and tentativeness, seen when people (particularly women) use “should” or “maybe”. Certainty (“always”) reinforces what is said but differentiation (“but”) qualifies what is said.² People also show more cognitive sophistication in their language as they age,^{7,8} which may ultimately have positive benefits as ruminating and writing about troublesome aspects of one’s life is beneficial to health.⁹

How people speak is described by several categories in the LIWC, including the dimension that taps analytical language. This type of language uses articles (below, with) and prepositions (and, the), both of which afford explicit connections among thoughts, distinctions among elements, and show how points relate to each other.⁴ Prepositions signal “concrete” information, relay true descriptive information about what something is or is like, and is more complex.³ This manner of speech is in contrast to a narrative, story-like informal style that may be seen when people are relaying events. Analytical language is used more often by men,^{6,8} although women employ discrepancies (should, could) more than men in most communication contexts.¹⁰ Less analytical language is now used in general, as informal language is increasing in many different venues, including those that formerly included a lot of analysis (including television (TV) news, political speeches, and news articles), decreasing as technology and issue-complexity increase, leaving “sound bites” that fail to show connections and critical relations among points.⁵

In sum, language content and expression reflects cognitive processes in systematic ways. Our question focused on whether systematic differences in analytic and cognitive language is a reflection of temporary emotional states. Our purpose was to examine language complexity and cognition in both content and transmission as a function of affective priming, positing that negative affect would increase rumination as seen in analytic language (that is, lead to language of “explaining”), as well as insight and causality, reflecting language focused on specific reasons.

METHOD

Participants and Design

A total of 64 participants (27 men, 37 women) were assigned randomly to write about either “positive aspects of myself” or “aspects of myself that I would like to change”. Each volunteered or participated for class credit, as per conditions of approval by the Institutional Review Board (IRB). Their writing occurred in the context of several other lab tasks not reported here. The manipulations resulted in a 2×2 (Sex×Affective Prompt) design.

Dependent Measures

Written responses to the prompts were typed verbatim into MS Word documents. Then, in order to examine cognitive language

according to affect priming, the LIWC² was applied to each reflection, producing a percentage of language comprising our categories of study. The LIWC taps language of psychological processes (social, affective, cognitive, perceptual processes), personal concerns, and functional words (such as pronouns), distributing language into over 70 pre-set categories.

Data Analysis

The results from the categories of interest (various aspects of cognitive language and analytical language) were then compared *via* multivariate analysis of variance test (MANOVA) with prompt and participant sex as independent variables. Follow-up analysis of variance tests (ANOVAs) were used to further examine significant MANOVA effects.

RESULTS

The linguistic variables that comprise the category of cognitive thought (insight, differentiation, discrepancy, causation, tentativeness, and certainty) were entered as dependent variables in a 2×2 (Sex×Prompt) MANOVA, resulting in a medium and significant main effect of prompt, $F(6, 55)=5.81, p=0.001, \text{Wilks' } \lambda=0.61, \eta_p^2=0.388$. There was no main effect of sex or an interaction, both $F_s(6, 55)<1.76$, both $p_s>0.125$. Means and standard deviations from this analysis are seen in Table 1.

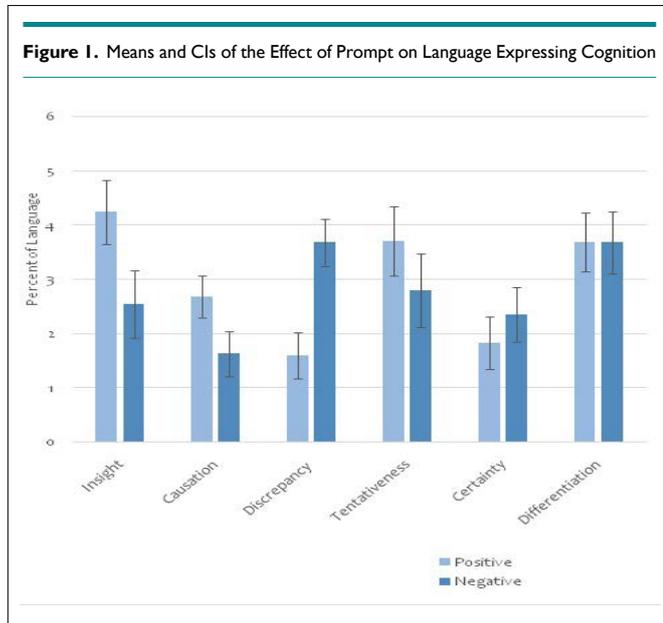
Table 1. Means and Standard Deviations for Percentage of Various Aspects of Language as a Function of Sex and Affective Prompt

	Sex			
	Men		Women	
	Affective Prompt			
	Negative	Positive	Negative	Positive
Analytic Language	48.43 (32.92)	43.68 (23.31)	31.53 (26.76)	52.54 (31.95)
Cognitive Mechanisms Insight	2.51 (2.27)	3.82 (2.87)	2.54 (2.06)	4.73 (5.22)
Causation Causation	1.16 (1.61)	3.35 (2.61)	1.86 (1.93)	2.01 (2.44)
Discrepancy	3.42 (2.43)	1.78 (3.10)	3.79 (2.10)	1.40 (1.69)
Tentativeness	1.21 (1.73)	4.35 (4.62)	3.62 (4.06)	3.05 (2.77)
Certainty	2.58 (3.28)	1.86 (3.28)	2.24 (2.28)	1.78 (2.07)
Differentiation	3.25 (2.52)	3.80 (3.42)	3.89 (2.70)	3.57 (3.39)

Note. Numbers represent percentage of language classified in the LIWC category.

Follow-up ANOVAs were performed; means and CIs are seen in Figure 1. More discrepancy (e.g., “should” or “maybe”) was seen in those writing from the negative compared to the positive prompt, $F(1, 60)=11.14, \text{MSE}=5.57, p=0.001, \eta_p^2=0.157$. Causation (i.e., “because”) was more likely among those writing after a

positive rather than negative prompt, $F(1, 60)=4.27$, $MSE=4.86$, $p=0.043$, $\eta_p^2=0.066$, as was insight, $F(1, 60)=4.17$, $MSE=11.14$, $p=0.046$, $\eta_p^2=0.065$. No significant effects were seen for tentativeness, certainty, or differentiation.



We used univariate ANOVA to examine the broad category of analytical language; means and standard deviations are located in Table 1. Analytical language was not affected by sex or prompt type, both $F_s(1, 60)<1.20$, $MSE=834.54$, $p_s>0.277$; the interaction was also not significant, $F(1, 60)=3.02$, $p=0.09$.

Because “wordier” responses may have led to increases in more evidence of cognitive processing or analytic language, we used word count (WC) as a covariate in the foregoing analyses. The MANCOVA with cognitive processes did not show an effect of WC, $F(6, 54)=1.72$, $p=0.130$; nor was WC significant in the ANCOVA for analytic language, $F(1, 59)<1$, $p=0.452$.

DISCUSSION

Our results show how affect may drive systematic differences in cognition. Surprisingly, causality and insight were prevalent in language after positive prompting, perhaps because people were providing self-justification for positive self-talk. Discrepancy was more prevalent following a negative prompt, suggesting counterfactual thought. No differences in the informal, story-like style that marks lack of analytic language were seen, suggesting that participants were focusing equally on narration regardless of prompt. Unlike previous research,^{5,10} there were no sex differences in analytic or cognitive language. Results were not due to how many words were written by participants in response to their prompt.

Language that includes causation (such as effect, or reason) as well as personal insight (such as understood, know) typically demonstrates a type of cognitive complexity that reflects reasoning and facts, and which relays events in a straightforward way. In response to thinking about their good qualities, participants may

have used more of these linguistic devices so that they could explain themselves as they spoke about good aspects of themselves, coming up with evidence to support their argument—unsurprising considering that writing positively about the self in public should lead people to provide justification and rationale so as not to appear too boastful. Moreover, this sort of language likely did not include fillers because the narrative was fairly well-known. For example:

“I like to think I’m a pretty trustworthy and dependable person if you get to know me. If a friend or family member needs something from me, I’m usually quick to do it with no issue or expectation of reward. If a friend needs a ride somewhere or needs to be picked up, for example, I’ll usually drop what I’m doing and help them out. If a friend or family member needs me to keep a secret, I usually always do. But this characteristic of myself does have drawbacks sometimes.”

Unlike previous research³⁻⁵ no sex differences were seen in the use of words signaling causality, insight, or certainty. One possible reason that there were no sex differences is that the task was very structured, and the affective prime was the main determinant of content.

Negative prompts increased discrepancy, which may reflect counterfactual (“what if?”) thinking. This finding is not surprising given that “should” and “would” are likely good linguistic devices to explain or deconstruct negative events. Justification or post-hoc explanation about what has happened, or perhaps what should be happening or have happened, marked writing about negative behavior. For example:

“I should improve my social skills. I struggle to make normal conversations with people and hate meeting new people. I hope to be able to normally hold a conversation with someone without feeling nervous. I want to learn to meet new people and make new friends.”

And:

“I could improve on not worrying if people are mad at me or always trying to make everyone happy. At some point someone will get mad at you and it is a waste of time to try and please everyone.”

Limitations and Implications

While supervised computer models seek to delineate algorithms that map on to known data patterns, an unsupervised one delineates patterns that are seen organically in the data.¹¹ Our results confirm previous unsupervised models in predictable ways, generally harmonizing with the results of research based on over 200 million words. More importantly, the language that reflects the pre-determined categories has been shown to reflect meaningful psychological processes in speakers. As such, our findings not only contribute to the research literature on use of the LIWC, but add to work describing how cognitive processes may be manifested in our language given temporary, but salient, emotional states.

CONCLUSION

Analytic language taps expression of thought, whereas cognitive mechanisms measured by LIWC reflect content. Analytic expression did not vary as a function of affective prime, but content of language did, with persons showing language including reasoning and facts when prompted to think of good things about themselves, but using language including discrepancies (such as “should”) when prompted to reflect on their negative attributes.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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Original Research

The Tale of Two Schools: Investigating the Understanding of Mental Health by Students, Parents and Teachers in Rural and City Bangladesh

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ABSTRACT

Objectives

The main aim of the study was to investigate the understanding and attitudes of mental health held by students, parents and teachers using strength and difficulty questionnaire (SDQ) scores and qualitative responses. Attitudes towards mental health and well-being are important as they can increase stigmatization and prevent young people seeking help and support.

Methods

To assess the understanding of mental health needs of students the SDQ was administered to parents (n=18; rural n=12 and city n=6), teachers (n=22; rural n=16 and city n=6), and students (n=23; rural n=17 and city n=6). In addition to this, semi-structured interviews were undertaken with students (n=14; rural n=9; city n=5) and parents (n=14; rural n=8; city n=6). Further, written narratives were received from teachers (n=12; rural n=6; city n=6). SDQ results were subjected to the non-parametric Mann Whitney-U with the Bonferroni correction applied and qualitative data was analysed using thematic analysis.

Results

SDQ results showed students in the rural location had significantly higher mental health needs than those in the city location ($p < 0.017$). Thematic analysis revealed that parents in the rural location do not understand the term 'mental health' and therefore, it is not seen as a problem despite high needs. Teachers in all locations and parents in city location have a limited understanding of what mental health means.

Conclusion

There is a lack of understanding about what mental health by parents in the rural community and a limited understanding of what mental health is by all teachers and parents within the city community. Even though high-SDQ scores were observed in both the rural and city location, SDQ scores were significantly higher in the rural location. These findings support the need for future mental health advocacy within Bangladesh schools.

Keywords

Mental health; School; Bangladesh; Education.

INTRODUCTION

The global mental health treatment gap is enormous and represents a gross inequity that exists with people's ability to access mental health provisions in low-income and middle-income countries (LMICs).¹ The World Health Organisation (WHO) shows that the global burden of mental disorders is increasing and predict health systems throughout the world will not be able to cope.² Approximately, 85% of the world population reside in 153 LMICs and more than 80% of people who have a mental disorder are located within these LMICs.³ However, approximately 90-95% of mental health resources, including human resources for psychological therapies are being delivered in countries that only account for 5% of the population.⁴⁻⁸ This is a global inequity and it is unjust.¹

It has been estimated that 50% of all lifetime cases of mental health begin by age 14 and 75% by age 24.⁹ Mental health disorders are estimated to affect 10-20% of youth in LMICs.¹⁰ This conservative estimate fails to address issues related to demand side barriers, inhibited by factors such as stigma, or supply side barriers.^{11,12} This may be related to a higher number of stress related trigger events such as natural disasters, war and conflict or poverty.¹³

In Bangladesh, over 6 million people experience depressive disorders and almost 7 million people have anxiety disorders.¹⁴ It is estimated that more than 10,000 people are dying by suicide in the country.¹⁵ Among students aged 13-17 in Bangladesh, 4% of boys and 6% of girls consider attempting suicide.¹⁶ In the Bangladesh National Survey (2019) it was accepted that at least 14% of children between 7-17-years suffer from mental health issues and yet 94.5% do not seek medical attention.¹⁷

Mental health stigmatization can prevent seeking help and worsen youth mental health.^{18,19} The National Institute for Health and Care Excellence (NICE) guidelines,²⁰ have provided evidence that awareness programmes can facilitate support for youth with mental health issues. Emphasis is put on the dissemination of mental health literacy being filtered down from service providers and support networks, to communities to enable them to effectively provide evidence-based psychosocial interventions for young people.¹⁸⁻²⁰ Psychosocial interventions are likely to be important in young people for promoting resilience and reducing the prevalence of mental health disorders.¹⁹

This current research was designed to explore the understanding of mental health from the perspectives of teachers, parents, and students, from two schools in Bangladesh, one in a rural location and one within Dhaka, the capital city of Bangladesh. Our mixed methods approach embraces action-research using an evidence-based approach so the impact of solutions will be within months as opposed to years or decades. This paper represents the first stage in this approach, which is divided into two parts: 1) the assessment of student needs and 2) the exploration of beliefs and attitudes by parents and teachers regarding their understanding of mental health.

MATERIALS AND METHODS

All respondents were briefed that the aim of the research was to investigate 'how to help students in school'. Schools pre-selected students who they believe would benefit from possible future intervention, either due to a mental health issue or with a learning difficulty problem of some kind. No description of mental health was given as a primary objective of the study was to investigate the understanding of 'mental health' from the perspective of the student, parent and teacher between the rural and the city location. Other than the administration of questionnaire and interviews, no additional material was given to any of the respondents. No clarification was provided on what the term mental health means during this stage of the investigation. This ongoing study protocol was approved by departmental Research Ethics Committee.

The original protocol involved an additional recruitment strategy designed to reach a greater number of respondents to enable the use of parametric statistics. However, the preliminary data obtained was cut short due to coronavirus disease 2019 (COVID-19) outbreak, resulting in early collation of data. The numbers reached were considered sufficient to carry out non-parametric statistical analysis.

The Strength and Difficulties Questionnaire

SDQs were sent to 40 teachers, 40 students and 40 parents, with a 50:50 split between rural and city locations and between male and female students (52% male and 48% female). However, the response rate regarding the completion of the SDQs was as follows: student respondents (n=23; rural n=17 and city n=6), parent respondents (n=18; rural n= 12 and city n=6) and teacher respondents (n=22; rural=16 and city n=6). All student respondents were between 7 and 14-years of age. The SDQ was available to all respondents in English as well as a professionally translated copy in Bengali. For access purposes, should a respondent be unable to read or write in either English or Bengali, the questions were read out to the respondent by the field researcher, who was fluent in English and Bengali, and answers described when required.

The self-reporting form of the SDQ is a standardised measurement instrument widely used for the assessment of different emotional and behavioural problems related to mental health in children and adolescents.²⁰ The SDQ is made up of a total of 25 statements distributed across five scales: Emotional symptoms, conduct problems, hyperactivity, peer problems, and prosocial behaviour. With the exclusion of prosocial behaviour, all total scores accumulated results in the total difficulties score of the SDQ, which ranges from 0-40. The higher scores representing a poorer mental health.²¹ Scores between 0-13 are considered within the 'normal' band, 14-16 is the 'borderline' band and above 17 is within the 'abnormal band'.

Significant differences were identified using the standard Mann-Whitney U tests for comparisons between two groups, $p < 0.017$ was considered statistically significant. Tests of the three a priori hypotheses, that significant differences would be observed

between rural and city locations within the teacher, student and parent subpopulations, were conducted using Bonferroni correction adjusted alpha levels of 0.017 per test (0.05/3). In addition to this, descriptive statistics were applied.

An accepted quantitative methodological limitation within this study is a lack of a control group. Therefore, total difficulties scores should be viewed with some element of caution.³

Semi-Structured Questionnaire

Due to time restrictions presented by the outbreak of COVID-19, Teachers were asked to complete a semi-structured questionnaire *in lieu* of a semi-structured interview. This included a SDQ component as well as open-ended questions that explored the concept of mental health. This included requesting a definition of mental health and asked teachers if they have witnessed any risk-taking behaviours, such as self-harming, drug or alcohol use, violent or aggressive behaviours to others, etc.

Semi-Structured Interview

Students and parents undertook a semi-structured interview, designed to explore their understanding of mental health and to assess the needs of individual student's. Questions explored access to education, educational histories, aspirations, responsibilities that impact attendance, stressful events, family dynamics and any known learning difficulties. Questions were asked to explore the symptomology and behaviour associated with mental health disorders, such as hallucinations, delusions, confusion, disturbed thoughts, obsessions, compulsions, depression, emotion regulation, anxieties, eating, sleeping patterns and risk-taking behaviours. Non-verbal active listening techniques were employed by the interviewer.²²

Qualitative Methods

Thematic analysis was chosen for synthesizing key concepts or themes surrounding mental health that were embedded into the narratives provided by parents, students, and teachers in the rural and city location in Bangladesh. Thematic synthesis was rooted in the research tradition of grounded theory and therefore, the themes are grounded in the data itself.²³ This method consists of three stages 1) coding text 2) developing descriptive theme headings called 'categories' and 3) generating analytical themes referred to as 'themes' that can be generically explained.²³ Themes were independently drawn from the data grounded in the narrative by all authors on an independent basis. Themes identified were found to be consistent between researchers. In the inductive analysis, emphasis was on categories as opposed to exact words or wording used due to 60.7% of interviews requiring translation from Bangla into English.

Primary translation of the recorded interview had been performed by the field researcher. An anonymised version of each recorded interview was further sent to an independent translator that verified the content of the transcripts. Any discrepancies were

removed from the analysis. Translated transcripts were provided to all researchers for thematic analysis and coding purposes.

Written narrative from teachers were not compared against the verbal narrative from parents but narrative was explored within these separate groups. Data collated from students and parents in rural locations were compared against student and parents in city locations, respectively.

Because stressful events are associated with mental health²⁴ and the neurological response to stress is a significant biological factor associated with the onset of mental health disorders,²⁵ narratives were explored for experiences of traumatic or stressful events that may have had a noticeable impact on the student, from the student perspective and from the parent perspective.

RESULTS

Demographics

Demographic data can be viewed in Table 1. Please note, four rural student respondents failed to provide an age and five rural parent respondents indicated that their age was not known or known (as oppose to leaving no response). It was known that all student respondents were aged between 7 and 14-years of age.

Statistical Analysis

No significant differences in SDQ scores were observed between male and female groups within the rural location or within the city location. Eighty-one percent of respondents reported SDQ total difficulty Scores that were borderline or above. This includes 100% of all scores observed from the rural community and 36.8% observed from the city community.

The difference in observed total difficulty scores between the rural and city school can be seen in the measures of central tendency displayed using a Box Plot (Chart 1). Interestingly, there appears to be a greater variance and distribution of scores within the parent city subgroup. Furthermore, all total difficulty scores observed from the city group appear to be markedly lower than those observed in the rural location.

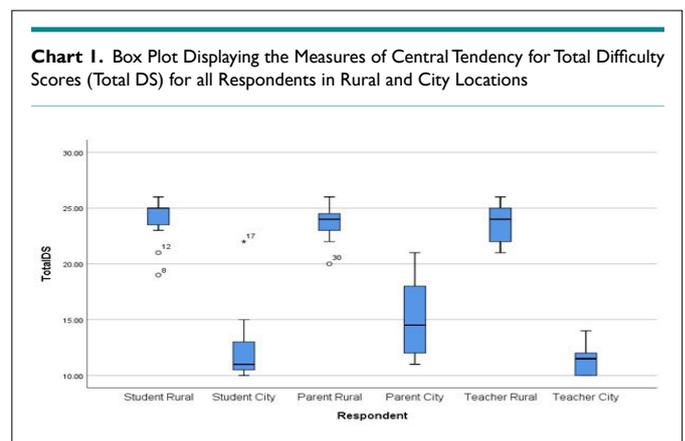


Table 1. Demographic Data Collected from Student and Parent Respondents

Demographic Data	Frequency (n)		Mean±SD Or Percent	
	Students		Rural	City
Gender				
Male	8	3	47.1%	50%
Female	9	3	52.9%	50%
Total	17	6	100%	100%
Age				
Male	7	3	11.00 ±2.09	10.67±2.08
Female	6	3	10.57±2.51	9.67±3.05
Total	13	6	10.77±2.24	10.16±2.40
Educational Plan				
Compulsory Education Only	17	6	100%	100%
High School Graduate	1	6	5.88%	100%
Further Education	1	6	5.88%	100%
University	0	6	0%	100%
Post Graduate	0	2	0%	29%
First Language				
English	1	6	6%	100%
Bangla	16	0	94%	0%
Parents				
Gender				
Male	7	3	38.89%	50%
Female	11	3	61.11%	50%
Total	18	6	100%	100%
Age				
Male	5	3	48.75±13.74	45.33±8.33
Female	8	3	35±7.94	43.00±5.57
Unknown	5	0	-	-
Total	18	6	42.85±13.01	44.16±6.46
Highest Educational Attainment				
Unable to read or write	14	-	77%	-
No Schooling	16	-	89%	-
Compulsory Education Only*	1	-	5.55%	-
High School Graduate	-	-	-	-
Further Education	-	-	-	-
University	-	-	-	100%
Post Graduate	-	-	-	60%
First Language				
English	-	5	0%	83.30%
Bangla	100%	1	100%	16.70%

The non-parametric Mann–Whitney U with the Bonferroni correction applied, revealed significant differences were observed in SDQ total difficulties score within the student group between rural and city location schools ($U=2.00$; $Z=-3.67$; $p=0.000$). Significant differences between rural and city student groups were observed in responses hyperactivity ($U=13.5$; $Z=-2.946$; $p=0.003$), conduct problems ($U=2.50$; $Z=-3.80$; $p=0.000$) and emotional symptoms ($U=0.000$; $Z=3.98$; $p=0.000$) subcategory questions,

but not with peer problems ($U=23.00$; $Z=-2.28$; $p=0.027$), or prosocial behaviour ($U=35.00$; $Z=-1.41$; $p=0.175$). Descriptive statistics viewed in Table 2 shows mean±SD, median and variance for the rural and city student subgroups and the associated p values.

Significant differences were observed in the total difficulties score within the parent group between rural and city locations ($U=1.00$; $Z=-3.30$; $p=0.001$), and within the teacher group between the rural and city location schools, respectively ($U=0.000$; $Z=-3.57$; $p=0.001$).

The observed SDQ responses from parents in rural and city locations were significantly different in most subcategories of the SDQ scale. Specifically, prosocial behaviour ($U=1.00$; $Z=-3.30$; $p=0.000$), peer problems ($U=4.00$; $Z=-3.40$; $p=0.001$), and emotional symptoms ($U=14.00$; $Z=-3.17$; $p=0.001$) were all observed as showing significant differences. However, there were no significant differences between parent SDQ responses on hyperactivity ($U=14.00$; $Z=-2.27$; $p=0.041$) or conduct problem questions in rural and city communities ($U=25.50$; $Z=-1.03$; $p=0.304$). Descriptive statistics viewed in Table 3 shows mean±SD, median and variance for the rural and city parent subgroups and the associated p values (Table 3).

Teacher responses between the rural school and the city school showed significant differences in all SDQ subcategories, namely prosocial behaviour ($U=2.00$; $Z=-3.45$; $p=0.000$), hyperactivity ($U=16.00$; $Z=-2.50$; $p=0.016$), peer problems ($U=2.50$; $Z=-3.46$; $p=0.000$), conduct problems ($U=0.000$; $Z=-3.46$; $p=0.000$) and emotional symptoms ($U=3.00$; $Z=-3.46$; $p=0.000$). Descriptive statistics viewed in Table 4 shows mean±SD, median and variance for the rural and city teacher subgroups and the associated p values.

Thematic Analysis

A thematic analysis was performed on the narrative provided by the transcripts observed from the semi-structures interview responses collated from all parents ($n=15$; rural $n=10$; city $n=5$) and all students ($n=14$; rural $n=8$; city $n=6$).

Interestingly, all teachers and all city-based respondents chose to speak in English, whereas all rural parents spoke in Bengali as well as 75% of rural students.

Mental Health

The term ‘mental health’ was not understood by 91.6% of parents in the rural location of Bangladesh. Only one rural respondent attributed an incorrect meaning to mental health as ‘immoral development’ in the context of ‘young boys playing card games’. In contrast, 100% city parents viewed mental health as ‘social dysfunction’ with young people being identified as lacking abilities to ‘do’ something, whilst displaying ‘strange’ or ‘immoral’ behaviours that ‘make others feel uncomfortable’. For all teachers and city parents, all underlying aetiology of all mental health disorders were

Table 2. Statistical Differences in Total difficulties score Responses Between Student Groups in a Rural Location School and a City Location School (Mean±SD; Median; Variance)

	Student						p
	Rural (N=16)			City (N=7)			
	Mean±SD	Median	Variance	Mean±SD	Median	Variance	
Total DS	24.06±1.84	25.00	3.396	12.86±4.38	11.00	19.143	<0.001
Prosocial	8.6±1.36	9.00	1.850	7.43±1.90	8.00	3.619	0.175
Hyperactivity	6.13±0.718	6.00	0.517	3.42±1.82	3.00	2.619	0.003
Peer	4.88±1.20	5.00	1.450	3.00±1.83	2.00	3.333	0.027
Conduct	6.5±0.894	7.00	0.800	3.43±0.976	3.00	0.952	<0.001
Emotion	6.5±0.727	7.00	0.529	3.00±1.00	3.00	1.000	<0.001

Table 3. Statistical Differences in Total difficulties score Responses Between Parent Groups in a Rural and a City Location

	Parent						p
	Rural (N=12)			City (N=6)			
	Mean±SD	Median	Variance	Mean±SD	Median	Variance	
Total DS	23.58±1.56	24.00	2.447	15.17±3.76	14.50	14.167	<0.001
Prosocial	9.50±1.00	10.00	1.000	8.00±1.67	8.50	2.800	<0.001
Hyperactivity	6.42±0.792	7.00	0.629	3.33±1.03	3.00	1.067	0.041
Peer	5.25±0.965	6.00	0.932	2.67±1.03	2.00	1.067	0.001
Conduct	5.92±1.24	6.00	1.538	5.17±1.60	5.00	2.567	0.304
Emotion	6.00±0.853	6.00	0.727	4.00±2.00	4.00	4.000	0.001

Table 4. Statistical Differences in Total difficulties score Responses Between Teacher Groups in a Rural Location School and a City Location School

	Teacher						p
	Rural (N=12)			City (N=6)			
	Mean±SD	Median	Variance	Mean±SD	Median	Variance	
Total DS	23.62±1.54	24.00	2.383	11.50±1.52	11.50	2.300	<0.001
Prosocial	8.00±1.26	8.00	1.600	4.67±0.82	4.50	0.667	<0.001
Hyperactivity	5.81±0.981	6.00	0.963	4.17±1.33	5.00	1.767	<0.001
Peer	5.12±0.885	5.00	0.783	1.83±1.12	1.50	1.367	<0.001
Conduct	6.38±0.806	7.00	0.650	2.50±0.548	2.50	0.300	<0.001
Emotion	6.31±1.01	6.50	1.029	3.00±0.894	3.00	0.800	<0.001

attributed to 'lack of family bonding'. This is seen as a limited understanding of mental health.

The city teacher's written narrative showed confusion and conflict in their understanding of mental health. 'Mental health' is seen as 'similar to physical health' by all teachers, showing an understanding that everyone has mental health, and implying that people can improve their mental health, as they do their physical health. However, all teachers report that any mental health 'abnormality' is caused by a 'lack of bonding' and, as one teacher reported, this inhibits a child's ability to 'cope with other people'. Ninety four percent of rural and 100% of city teachers felt removed from 'family matters' and therefore, mental health prevention is seen as largely outside their remit. The observed behaviour of students that are seen to be 'struggling' are described using phrases such

as 'different', behave in a bad way', 'act deliberately' and show a 'refusal to share' their thoughts with others. These singular comments collectively show a clear lack of understanding of what mental health means for someone.

Risk Taking Behaviours

There was no report of any risk-taking behaviours by any respondent other than the generic written narrative provided by two teachers. A city teacher noted that students have experienced 'pressures from teachers, parents or peers' that have caused 'negative behaviours' towards themselves and others. A rural teacher noted changes in 'violent' behaviour and 'also suicide'. Both teachers noted this was related to 'family bonding' and the city teacher indicated that this 'was not a school matter'. This implies that teachers will be

unable to support a student in mental health crisis, that may self-harm or has suicidal ideation.

In the city location, 67% teachers factually report policy-type narrative, explaining that the school had two types of support for students, a 'medical counsellor' and a 'moralities counsellor'. This would imply that risk-taking behaviours are required to fall in one of these categories and diminishes the importance of other aspects of mental health.

Learning Difficulties

Classroom strategies are not based on assessments of need and interestingly, no respondent used any of the key terms: dyslexia, dyscalculia, dyspraxia, autism, attention/focus, hyperactivity, cognitive/cognition, auditory or processing.

Learning difficulties was not conceptually understood by the parents in the rural locations. The notion of 'learning difficulties' appeared absent from the vocabulary of 100% of rural parents. Any educational or difficulties in learning that their child was having at school was considered a school issue by 100% of rural parents, and 88% of them believed that teachers could 'fix' these issues. Eighty one percent of rural students reported that they were 'badly behaved' and needed to 'try better' when they struggled to learn.

All city parents understood that learning difficulties are associated with using 'visual aids' and the responsibility of a student's learning was joint between parents and school. All city students used the term 'visual aids' when being asked about learning difficulties, 83% of city students reported needing 'visual aids' to help them learn, and 67% thought they required additional time 'to make sense' of their work.

All teachers recognise that some children require additional support and used the term 'visual aid'. Thirty three percent of city teachers reported 'unmet needs' without any further disclosure. One city teacher noted teaching is 'book and classroom based' which 'made students think they are not good'. Eighty three percent of city teachers provided narrative that 'learning needs' involved a student being unable to do something, such as 'they can't talk properly', or does something 'wrong', such as they display 'immoral behaviour'. Similar, 67% rural teachers indicate students are 'unable' to do something, such as 'unable to learn equally'.

Attendance

Sixty-seven percent of rural parents reported that their child has regular school attendance, whereas 22% indicated that absenteeism was related to working 'in the field' and 'childcare responsibilities'. One rural parent explained that her son played cricket or football with friends. Consistently, 22% rural students attributed their absenteeism to 'working in the field' and 'childcare responsibilities'. One student explained they preferred playing cricket, which was done to occupy his younger sibling whilst the rest of the family 'worked in the field'.

Eighty-eight percent of rural parents reported more than three offspring and only sent the one child to school. This was always related to 'hidden costs', such as uniform and stationary. 38% explained the other siblings helped work in the field as the cost of food for the family was a bigger priority than school.

There was no written narrative on attendance provided by city teachers other than ticking a box, indicating attendance as 'excellent'. Consistently, city parents explained that their child attended school regularly, 80% of which noted that it was important. All city student respondents said they attended school regularly.

Educational Values

All parents felt education and school was important and agreed that their child was happy in school. The rhetoric used by rural parents was that education was important to 'get a job in the city' whereas city parents explained school was important for their child's development.

There was a direct contrast in parental experiences of education. Eighty-nine percent of rural parents had no formal education, 55% claimed they were unable to read or write but could write their name and 22% claimed they were unable to read or write and unable to write their name. Only one rural parent had received some form of schooling during childhood. In contrast, all city parents had completed a University degree and 60% completed a University Master's Degree.

All students valued education and saw it as important and were happy at school. Interestingly, all rural students stated that their worst subject was English whereas 100% city students said their worst subject was Bangla. Favourite subjects for 100% rural students was Bangla whereas the city student's favourite subjects included English (50%), Maths (33%) or (17%) Science. All city students believed they were clever whereas only 50% rural students believed they were clever.

Aspirations

Only parents and students were asked about aspirations. The concept of 'aspirations' needed to be explained to 89% rural parents, all of whom believed they would grow up and work in the field. Seventy-eight percent of rural parents explain that they never knew about aspiration and believed they had 'no choice'. All rural parents believed that since they had no formal education, they could only work in the field. Interestingly, all rural parents hoped that their child, who was receiving an education would be 'good enough' and 'work hard enough' to work in the city. Zero rural parents could explain what specific jobs were available in the city other than 'office' work.

The aspirations of rural students appeared to be linked to 'serving' the community whereas city students used rhetoric associated with personal enjoyment or financial reward. All rural students had aspirations: Thirty-eight percent 'hoped' to work in an office in the city, 38% 'hoped' to be a government official, one 'hoped' to be a teacher in a rural community and one 'hoped' to

be a doctor within the rural community as 'we don't have doctors here'. All rural students indicated that these aspirations were not spoken about at home. No rural student provided rhetoric about money or finance. All city students had aspirations: One student indicated that they 'want' to be a 'heart surgeon', one stated that they 'want' to be a 'famous cricketer', two wanted to run a 'business' to 'make money', one 'wants' to be a fashion designer and one 'would like to' work in government and 'serve others'. All city students explain that these aspirations are regularly spoken about at home.

Problems in the Community

All parents were asked what they believed the main problems were when raising children in their community. Sixty-three percent of rural parents provided a narrative related to poverty; not having enough money to buy food or clothes or to get your child to school. Twenty-five percent of provided the narrative that poverty stops a child attending education because they are required to 'work in the field'. Fifty percent claimed children 'do not listen' and one parent explained the main difficulty with raising children in her community is the 'immoral' activity of young boys playing card games.

Sixty percent of city parents are worried about not having enough time with their children. Forty percent of city parents indicated that they had to rely on others to provide childcare, such as maids and family members. Interestingly, 40% of city parents also indicated that 'maids' had more time with their child than they do. Only one parent believed that their child 'did not listen' and that this was a problem.

DISCUSSION

The relevant findings of this study showed that students identified from the rural and city school in Bangladesh scored high SDQ scores, although these scores were significantly higher in rural location than in the city location. These scores are supported by data collated from the parent and student interviews and suggest a high level of mental health need in both the rural and city location. What is worrying is that, given the high SDQ scores observed, parents in rural locations do not know what mental health is and parents in the city location, as well as all teachers, see mental health only in terms of 'lack of bonding'. The authors believe this view of mental health is severely limiting. We know from previous studies that lack of understanding or limited understanding on issues related to mental health is associated with the development and maintenance of stigmatization.^{8,18}

The concept that mental health was caused by a 'lack of bonding' and 'family insecurities' was a consistent findings that could be related to insecure attachment theory, whereby a primary attachment bond is broken or contaminated by fear.²⁶ Whilst this notion provides some insight into the development of mental health issues, these factors alone represent a limited understanding of mental health is and could possibly increase stigmatization, thus inhibiting a young person from seeking help.^{8,18} For example, using attachment theory alone for all mental health issues implies students with secure attachments will not have any mental health

issues. This represents a form of stigmatization that has developed through limited understanding.⁸ Therefore, to reduce the indirect stigmatization that is likely to be present through lack of or limited understanding, one immediate implication of this study, is the delivery of mental health advocacy within these specific schools as our next step. The authors believe this is an essential and immediate outcome of this specific research.

The authors would like to point out, they are not indicating that mental health conditions are caused by communities having a lack of or limited understanding of mental health issues or conditions, but, in line with previous literature, firmly believe that these factors are associated with increased stigmatization which can prevent young people from talking about their mental health and prevent them seeking help.²⁻²⁰

This research highlights the attitudes and understanding of mental health as well as learning difficulties from the parent and teacher perspective as well as the student perspective. This study highlights the differences in priorities between parents living in a city community and parents living in a rural community that is socio-economical deprived. Research focusing on stigmatisation and discrimination towards those with mental health disorders, particularly with the co-morbidity of learning difficulties, in LMICs is conspicuous.^{2-9,11-20} Research has focused on the detrimental impact on individuals with a mental health condition, as opposed to the understanding or conceptualisation of mental health as a construct itself.^{2-9,11-20} However, by focusing purely of the service user's perspective of stigma and not those represented by the wider community, including the 'discriminators', will fail those with mental health issues that require family and community based support in the absence of mental health professionals. Therefore, our research supports the notion that mental health advocacy and awareness is a primary priority in preventative strategy to support mental health and well-being within LMICs.

Subsidiary findings of this study show that 'storytelling' is currently being used within the classroom environment to support the mental health and well-being of students. Therefore, 'storytelling' would be accepted as a therapeutic tool. Storytelling has been found to improve cognitive reappraisal²⁷ which promotes emotional regulation and this educational teaching strategy would be particularly useful for anxiety disorders.²⁷ The use of 'story telling' was also used by a city teacher, but as a memory aid. Story telling can support the retrieval of long-term memory and improve the speed of working memory.²⁸ Using story telling as a memory tool improves problem solving-abilities which is associated with improved mental health and greater efficiency in the ability to make and change schemas.²⁸ With this in mind, the authors look towards developing a 'storytelling' intervention tool to work directly with this cohort group that encourages young people to talk about their emotions and feelings.

No respondent quantifiably attributed any risk-taking behaviour to any specific student. This contradicted written narrative provided by two teachers on generic risk-taking behaviours. One teacher adamantly denied that any of their students would engage in 'immoral risk-taking behaviour'. This adamant denial

lacked consistency with the two other teachers who sign posted the mental health service provision of the school, as well as the report of 'violence' and 'also suicide'. Although not known, the researchers believe this denial may be symptomatic of stigmatization which would prevent students from seeking mental health support, increasing the likelihood of self-harm and suicide. Interestingly, more than 8,00,000 people die from suicide worldwide in every year² and in Bangladesh, there are 8.7 deaths from suicide for every 1,00,000 females and 6.8 deaths from suicide for every 1,00,000 males.¹⁷ The authors believe that this is worth further exploration.

There are known socio-economic factors that divide rural and city communities in Bangladesh.^{17,29} This notion supports our findings that only rural parents were seen to manage the conflict whether sending their child to school was more important than putting food on the table. Therefore, to support the primary prevention of mental health, we need to understand mental health and well-being in the environment and context in which they exist.³⁰ If mental health is higher amongst students within the rural community, then its key narrative is appears to be poverty. Although we cannot eliminate poverty, we can encourage the development of the relationship between student and teacher, and school and parent; we can provide an understanding of what mental health is and how to support someone who is struggling with their mental health and well-being within their existing communities. Although mental health awareness is necessary to move forward, the findings of this study also suggest action to further support rural communities is essential.

The authors accept that this study has significant limitations. The research data collated was cut short by COVID-19, prompting a variation and a weakening in design. The sample used was small and the parameters for using parametric statistical analysis was not met. Therefore, any generalisations made should be approached with extreme caution. Furthermore, there was a significant language barrier, causing discrepancies between interpretations and the further loss of data. However, what remains fundamental is that this study emphasises a need for further, more robust research where there is a high need and little in the way of mental health resources or understanding.

CONCLUSION

This study found high mental health needs in both a rural and a city school located in Bangladesh. Despite both schools showing a high prevalence of mental health needs, the results showed that overall mental health needs in the rural location was significantly higher than in the city location. These are preliminary findings based on the results observed in the SDQ scores from teachers, parents and students as well as from the parent and student interviews. Written narrative received from teachers were also considered. This study also showed that rural parents within this study lack an understanding about what mental health is and that city parents and all teachers struggle with a limited understanding of what mental health is, attributing the causes of mental health to 'family bonding' alone. We do not know if this leads to mental health stigmatization but our findings support other studies that suggest it is likely to. If this

is the case, this would prevent a student seeking out mental health help and support within these schools.

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CONTRIBUTORS

ZT, LEO: Conceived, planned and oversaw the study; designed questionnaires and semi-structured interviews, methodology. KC: field researcher, interpretation from Bengali to English. LEO: Statistical arrangement and analysis, Transcribing, Thematic analysis, writing of the original draft manuscript. ERH: Data inputting, transcribing, thematic validation. VSL: Thematic validation. Disagreement between researchers were resolved by consensus between LEO, ERH and VSL. All authors reviewed, commented on, and approved manuscript.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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Perspective

Call for a 'Live Third': The Impact of Institutional and Psychiatric Racism on Adebayo's Physical and Mental Health

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ABSTRACT

The author refers to a personal experience and feels it important to do so in order to highlight a crippling and appalling inhumanity by some towards black people. Much of what is written here is presented in the first person owing to the personal nature of the narrative. It manifests through stereotyping, stigmatisation, and racism towards non-white people. Racism is both institutional and interpersonal, and it is endemic. What gets played out in society is often repeated at an individual level. As a psychotherapist, the author affirms the need for clinical practitioners to move from a position of dismissal and objectification of Black lives, and to wake up to the terrifying fact of the early mortality of black people's lives from the trauma of racism which is very much imbedded in institutional policies and procedures.

Keywords

Black people; Trauma; Mental health; Psychiatric racism; Schizophrenia.

CA 'live third' — the presence that exists between the experience and its meaning'.... the 'live third' is the "other" that creates the possibility of processing the effect of the trauma.¹

On the 4th of October 2017, I received a shocking call from the Coroner's office to say Adebayo, my youngest brother was dead. Adebayo died on the 29th of September 2017. As next of kin, I was not informed for three days. The cause of death was said to be schizophrenia. He was 41. This was both shocking and devastating to me. This appalling dismissal and total disregard for his life is what has prompted the need for me to document what happened.

Here is His Story

Adebayo was a gentleman. He was kind, tall, and handsome. He was boyish in appearance charismatic and easy to get along with. He was easily liked because of his gentle nature. He was witty, sharp and intelligent. He was generous and compassionate. As a

young man, he excelled in most things effortlessly. He was in a choir, wrote poetry, was good at swimming, running, long jump, and hockey, and played the violin. He was a high achiever and a good all-rounder and admired for his versatility. When Adebayo laughed, I thought the world smiled with him. He was easy to love, and he had such a sunny smile. Even though I didn't hear him laugh as much over the years, I remember his smiles.

Growing up, Adebayo was the youngest of three brothers and a sister. He was doted upon. He was fun and charming to be around.

Adebayo was educated in a private boarding school in the UK and was a second-generation British black, born in Nigeria. He came to the UK at age three with his family. He went to boarding school for his primary and secondary education, returning home during the holidays. However, he didn't like the experience, but he made friends and had an active social life. He was grateful for his two brothers, who also attended the same school.

During his teenage years, at the age of 14, Adebayo's mother was killed. The loss was immense for the family. I feel the impact was more severe for Adebayo as he was the youngest, and was in his adolescent years. Rather unfortunately his father, (my stepfather) was not available to care for him. Adebayo and I lived together for part of the time he survived this period the best way he could, immersing himself in his social life of clubbing, music, going out, and drug taking, no different from any of his peers. Adebayo seemed to have coped up until age 18 or 19, but in his second year at the university, he became depressed and returned home to his father at which time he began to develop panic attacks, agoraphobia, and nightmares.

In his 30s and up until his death, Adebayo's main passion became his music. He collected vinyl, taught himself to compose, and made acoustic music, this became his main outlet.

Adebayo's older brother by two years described him as "*a remarkable student, sort of like a politician, winning people over with his wit and avoiding conflict by diplomacy*". Adebayo's dream was to settle down and have children. He struggled and fought against the 'illness of schizophrenia' for over 20-years.

Medical Intervention or Experimentation

Adebayo was first sectioned (this is when a person is detained under the Mental Health Act 1983 against their will, admitted to hospital, and given treatment, because they are perceived to be a threat to themselves or others).²

He was 18, and was immediately diagnosed with schizoaffective disorder. Adebayo complained of pain on his tongue. That pain I believe was linked to early separation and trauma of loss. Background history wasn't taken up and rather unfortunately, his treatment did not encourage family involvement as part of the recovery process, and the family were not privy to his treatment plan. The hope for Adebayo was that another would be capable of bearing the unbearable and be able to make sense of his external and psychic realities and help him integrate the two. Gerson described it as 'the attuned affective responsiveness' of the other.¹

For Adebayo, what transpired was that the necessary support was consistently missing and Adebayo was surrounded by indifference, marginalised and devalued for the majority of the time he was the care of support workers, doctors and psychiatrists. This daily attack on self, especially in an environment where one is dependent on the "other" for support, impinges on the psyche, chips away at the self, and is enough to drive one mad; which I believe is what happened.

Psychiatry comes closest to the police among medical specialties in pursuing practices and procedures that explicitly discriminate against minority ethnic groups in the United Kingdom. Evident in the disproportionate numbers of black people in psychiatric detention,² and in the misdiagnosis of schizophrenia within the black community. Black people are excluded from the "softer end" of psychiatric practice because they are deemed psy-

chologically unsuitable.³

History of Events

In 1999 at age 20, Adebayo was hospitalised under section 2 of the Mental Health Act and admitted to Edgware Hospital, London with a diagnosis of paranoid schizophrenia. He was immediately treated with Olanzapine, (Zyprexa). No background history was taken, and medication was preferred over psychological intervention.

From 2002 until 2017, Adebayo was treated with Olanzapine (Zyprexa), then Clopixol, (Zuclopenthixol) depot, and later Oral Risperidone and Clopixol (Zuclopenthixol) because he complained of constipation.

In 2003, he was treated with Risperidone 37.5 mg depot, 4 mg Chlorpromazine (CPZ) and Carbamazepine 100 mg bid. His doctor felt that the mood stabiliser helped him greatly but failed to see the severity of the side effects.

In 2004, he began to show high anxiety at any changes in his routine becoming anxious about any physical symptoms. Adebayo was diagnosed with Obsessive Compulsive Disorder (OCD), his symptoms were paranoid thoughts, inability to focus, eye rolling, food intolerance, and sleep intolerance, inability to sleep, hallucinations, and refluxes.

In 2005 at the age of 29, there was the first mention of timelines and counselling, and it was reported that Adebayo was able to talk about his mother's death, his guilt at not mourning that, his present illnesses, and other illnesses that affected his life. This could not be investigated further, and I believe it was already too late; as he was not able to trust in the care that was on offer.

In 2008, he began to display symptoms of panic and agoraphobic symptoms.

In 2010, Clozapine was immediately increased to 300 mg, and Sodium Valproate was introduced at 1.2 g.

In 2012, there was intervention by the crisis team. It was reported that he started showing psychotic symptoms, after he expressed thoughts of being watched. Clozapine was increased to 350 mg.

In October 2015, Adebayo was experiencing: ongoing anxiety, rumination, obsessive thoughts, compulsive behaviour, and feeling compelled to throw out food due to contamination. Clozapine was increased to 400 mg to see if it improved his symptoms even though he said he was scared and, as a result, struggled to take Clozapine at night due to nightmares and lack of sleep.

From May to June 2016, Adebayo started calling the Samaritans.⁴

He accepted that medication was the way forward as this

was what his family were told was the way forward for Adebayo. At this time he lived independently. He was isolated and lonely. He said that the only thing that may help was to live in supported accommodations where a “responsible person” gave him his medication.

From September to October 2016, he began to contact the out of hour’s crisis team frequently. On the 11th of February 2017—evidence of further deterioration in Adebayo’s mental state was reported. He was reported to have agitated, thought disorder. His doctors started him on Olanzapine and Sodium Valproate as there was no reported improvement in his mental state. His Clozapine level was increased to 400 mg, and his medication on discharge was 250 Clozapine, 450 mg Nocte, and Sodium Valproate 2 g Nocte. On the 13th of July 2017, Adebayo was awaiting a place for supported housing. On the 1st of Aug 2017, he moved to Southwood Smith House in London, a supported housing.

On the 16th of September, he met with his support worker. He reported ongoing issues with a neighbour, who he shared a flat with and who was an avid marijuana smoker. Adebayo had given up cannabis and was trying to eat well and look after himself. Yet the supported housing he was in and his flatmate was an avid marijuana smoker. Adebayo had reported that *“this gentleman had mental health difficulties”*. The environment contributed to his ill health.

Adebayo requested further psychological input. An appointment was made on the 29th of September 2017. Adebayo died on the 27th of September 2017. He was 41. In the month before he died, he reported he felt stuck and struggled to see how he might move forward with his life. This sense of helplessness and hopelessness we all carried as a family.

Gersie⁵ stated that *“when talking does not get people anywhere, when tears are exhausted and rage is paralyzed, they cease to exercise authority over the events of their life. Devoid of authorship, deprived of agency and filled with a pervasive sense of helplessness, the person refrains from speaking their mind... thoughts about their reality, and the consideration of possible actions to change that reality, are not understood as problems to be explored. On the contrary, both the situation and the way of life are accepted as inevitability, necessary given in a world out of which there is no escape and beyond which no possibilities can be perceived”*.

Adebayo’s explained that he couldn’t see a way out in the last few months before his death, sums the inevitability of his predicament. The police report said he was cold to touch, and it was difficult to know how long he had been lying dead. The coronary diagnosed the cause of death as schizophrenia. The account given by the consultant psychiatrist and the toxicity report was difficult to read, let alone digest. I spent a month trying to investigate what happened to Adebayo, attempting to speak to the housing manager where he resided, his social worker, psychologist, psychiatrists, crisis team, team manager, doctors. There was a disregard and/or dismissal of my inquiries, and within a week, I was beginning to feel I was the problem. It felt like his life did not matter. This I found painful, confusing and frustrating as his life mattered to me.

The Impact of Stigmatisation and Racism on Adebayo’s Mental Health

There is neglect and disregard for people struggling with the so-called illness of schizophrenia in mental health institutions. Zinkin,⁶ explained that the environment and persons available in these mental health institutions often reinforce and mirror the psychopathology expressed in the patients’ unconscious fears. Adebayo was not ill in the way he was diagnosed. He kept saying the medications were not helping and as a result he was reluctant to take them. He also spoke about the seriousness of the side-effects of the medication. His family were told by the social worker that his symptoms were because he wasn’t taking his medication. It was obvious the medication was not helping. We however, hoped he would be believed and be offered what he needed. Adebayo was very astute and aware of what was going on. He was desperate to get help but this help was not forthcoming. The two things he complained about were the medication and the lack of support. He often said that that *“the support staff didn’t care”*. This position of desperation and hopelessness is what we all shared as a family. Adebayo was disrespected, dehumanised, and overmedicated and medication continued to be the preferred option.

The antipsychiatry movement advocates that conventional psychiatric treatment often isn’t in the best interest of the patient and questions whether mental illnesses are actually illnesses at all. Psychiatry has no scientific basis for any of its treatments or methods.⁷ We would have to redefine who and what is seen as normal and on what basis are psychiatrists diagnosing people? It was in Adebayo’s second year at University reading Business Administration at Leicester in March 1998 that he became increasingly pre-occupied with the pain in his tongue, which he said had become overwhelming. He was unable to study. He tried to restart but felt depressed and dropped out. In October 1998, he developed panic attacks, agoraphobia, nightmares and began hallucinating. He was admitted to Edgware hospital on section 2 with a diagnosis of paranoid schizophrenia. This would have been a time for therapeutic intervention but none was on offer and this a consultant questioned why he wasn’t responsive to the psychological intervention/s offered 8-years after he was diagnosed and institutionalised. Giving him the label paranoid schizophrenia meant no other avenues could be sought.

After Adebayo’s death I decided to investigate about the diagnosis of schizophrenia and its link with psychosis. I found out through attendance of a workshop at the *Hearing Voices Network*⁸ that if one is experiencing psychosis this is not necessary a sign of an illness. It was helpful to get this confirmation as this is what I felt all along. Adebayo was trying to tell of his experience of how he perceived the world given his experience of the trauma both of loss and trauma caused by systemic and institutional racism.

The workshop confirmed that hearing voices is a symptom of many different conditions. Sometimes, it can be a fleeting phenomenon with little significance or a general statement of distress, and it shouldn’t mean a diagnosis of schizophrenia. In the early days, Adebayo reported hearing voices. The voices were

benign. The voices were from people he trusted who would take care of him. Evidence was a wish to be listened to, respected and giving the necessary care. I do not feel it is too much to expect that people in care should receive care by health practitioners but at the very least not cause any more pain to their patients.

Biologists believe that schizophrenia is biological and link its cause to a chemical imbalance or the result of synthetic drug use. However, today, there is still no scientific evidence as to the cause of schizophrenia.⁷ What has become evident is the level of psychiatric misdiagnosis of black men and that structural and interpersonal racism is rife in mental health institutions and severely disadvantages ethnic minorities, and significantly affects their health outcome. They are treated differently to white people; they are often treated inhumanely, disrespected, disregarded, and misdiagnosed. Black lives in this situation don't matter. It is far harder for a person of colour to recover under these circumstances.⁹

The Hearing Voices Network forum, believes one can become mentally ill as a result of extreme stress or trauma, and this can be a part of the root cause of the illness of schizophrenia. Someone experiencing schizophrenia can have a psychotic breakdown. Psychosis is a breakdown or malfunction of repression. If, for whatever reason, the repressed or unconscious memory is no longer unconscious and floods the conscious memory, then that common reality is becomes confusing. This can be brought on by periods of isolation which Adebayo experienced.

In the absence of a mother or a father, one would expect a receptive other would have been helpful. The mental health institution became replacement parental figures as when Adebayo became 18, they took over responsibility for his care. Trust and hope was placed in the doctors, psychiatrists, social workers, psychologists and care workers. One of the challenges and a reality for black men is that they are perceived to be more dangerous and violent in a world where white people are the majority. A lethal response is considered first to deal with the physical symptom in the form of stronger medication (this is borne out of fear,) before dealing with and recognizing the mental health symptoms.¹⁰ Adebayo was reported to “*be violent, appeared threatening and intimidating and appeared suspicious and paranoid*”. What actually happened, was Adebayo was trying to defend himself as he was pinned down by the staff on first admission. He was resisting medication. I know Adebayo was not a violent man as they had described.

According to research, black men are over-diagnosed with schizophrenia at least five times higher than any other group—a trend that dates back to the 1960s.¹⁰ In the UK, the incidence of schizophrenia was found to be significantly higher in black Caribbean people than in the white British population. The contributory risk factors appear to be a combination of social and psychological factors, which result in particular vulnerability to the development of schizophrenia.¹⁰ Not much has changed years later, according to UK government website, Ethnicity facts and figures statistics in 2017. Black men are shown to experience a mental disorder in the form of psychosis the highest of all ethnicities.¹¹ Adebayo was reported to have delusion, paranoia, persecutory thoughts, ruminating thoughts, and more. No thought was given to his past ex-

periences. He would have been better supported if he had been thought of as being fearful, anxious, stressed, not trusting of people, lost to depression, and over thinking.

Schizophrenia has become exemplary of modern-day types of insanity.¹² Given Adebayo's experience what feels insane is to expect compliance with psychotic medication, which in Adebayo's situation only served to suppress and confuse. Adebayo on several occasions said the medications was giving him nightmares and other bodily symptoms which finally led to the loss of functioning. The care that people experiencing psychosis receive is usually poor and adds greatly to their distress, worsens their outcome, and leads to their early mortality, according to recoveryinthebin.org.¹³ The wards are frightening places. I visited Adebayo there often, and the staff are overwhelmed, often lock themselves away, and are unable to provide basic support. Medication is prioritised over psychological intervention. The patients are being asked to justify why they are unwell through laborious form filling. Policy and decision makers frequently equate their illness to social dysfunction and pathology. Blame is put back on the victim. In this way, the perpetrator is free from addressing their part in it. The most common symptom that researchers believe contribute to misdiagnosis of schizophrenia is hearing voices as almost all incorrectly diagnosed patients reported auditory hallucinations.¹⁴

Pathways to Mental Healthcare

Racism permeates our economic, social, and political strata. Its impact and stresses contribute to ill-health and for some, admittance into psychiatric services. Unfortunately, people of colour fair worse with misdiagnosis in psychiatry. Factors, such as economic inequality, discrimination, loss of rights, and unstable housing, are contributory factors. Recovery, according to recoveryinthebin.org, identifies that it cannot be a one-size-fits-all and that some people will not feel recovery is possible.

In the UK, doctors, psychiatrists, and nurses are well-trained, but they are often under enormous personal strain from unrelenting pressure of work. This makes it difficult to pay individual attention to each patient. Doctors and psychiatrists are also made to work in tight time slots, and, as a result, they are unable or unwilling to get too involved. The high rate of turnover and locum workers also makes it difficult to receive any consistency or continuity of care. Doctors get paid to sell a particular drug. This can lead to a danger of giving up on very ill patients and treating them as guinea pigs. They can tarnish all patients with the same brush by developing an attitude, a false belief that the patient cannot be helped and cannot get any worse.

Today, the number of people seeking mental health support is worsening. This is evident from the numbers that are on a waiting list. There is a shortage in the number of trained and experienced doctors and psych professionals to meet the growing demand. Some support workers are often not adequately trained and are scared of being ‘contaminated’ by becoming ‘mad’ like the patient. As a result, the patients are dehumanised, and those doing the dehumanising justify their attitude by treating the patients as

less than human as a way of not feeling guilt.

There is a high representation of black as compared to white people in the healthcare system needing help. The expertise in care is not growing at the same rate. There are not enough trained black psychiatrists and doctors and other psych practitioners to meet the high proportion of ethnic minorities needing care. Keeping up with regulations in these professions is no longer a requirement, and keeping up with new regulations can be done online and is left to the individual. As a result, supervision is not a pre-requisite in some clinical work. Supervision, which is an integral part of the work, is being side-lined or not made compulsory.¹⁵

As a community of people, we need to more effectively address these disparities and not simply pay lip service to them. Diagnosis is too dependent on personal (subjective) judgement. It seems too easy to prescribe medication, and practitioners are not adequately held accountable for their actions. A more inclusive quality of care requires improved data systems, increased regulatory vigilance, and new initiatives to appropriately train medical professionals and recruit more providers from disadvantaged minority backgrounds. An inclusive quality of care should include the patient's wider social network, like family and friends.

Paola Leon, a practising psychiatrist of 25-years reminds that, "*Life can be difficult. But we have started to diagnose certain reactions and behaviours as 'mental illness' when, though painful, they are, in fact, part of the human condition*".¹⁶ Psychiatrists have a frightening amount of power at dispensing lethal anti-psychotic drugs. They have the power to decide someone is mentally ill and the power to lock them up against their will.¹⁷

Challenge for Psych Professions

The psych profession is predominately middle-class, white, and Eurocentric. The white practitioner is tasked to be aware of cultural differences and be aware that often a black person's problems are linked with the racism of the white dominant culture. That poverty, deprivation due to lack of opportunities, exclusion, and a sense of being marginalised, is a reality for most black people. The patient is looking for recognition and acceptance when what he often finds is an objectification. Being able to move from objectification to connecting with another without fear of being taken over is what is required to help some of our patients who are deeply distressed.

The modern-day definition of schizophrenia is a form of madness. My understanding of Adebayo is that he was not ill in the way he was diagnosed. He was in touch with his unconscious and conscious thinking which made him quite vulnerable. He knew a lot about our world and didn't have time for trivialities. He didn't take his experience of being in the world for granted unlike most ordinary people who do not reflect on their basic existence or being.

Adebayo experienced trauma of racism, which expanded the other trauma in his life of the loss of his mother. This loss is a form of melancholia, a sadness which you cannot put words to but

is located somewhere in the body and mind. A social worker, who got in touch and befriended Adebayo, said he often looked sad. In health, most people of colour can survive the impact of racism. If you are young and have witnessed irreparable trauma, with limited coping resources, and dependent on the other, then the hope is to have an attuned other, in the absence of this as with Adebayo, and countless others in the psychiatric institution, the journey is often perilous.

What remains shocking was the callous disregard for Adebayo's welfare on the part of the doctors, psychiatrists, support workers, and social worker. Even after his death, the disregard for human life continued. The racism and dismissal I encountered in an attempt to get in touch with those responsible for his care and those people around Adebayo before his death, the consultant doctors, psychiatrist, psychologists, social worker, housing manager, made the despair I felt in the space of a week, unimaginable. I was made to feel I was the problem. When all I wanted to know was what happened to my brother. I can't imagine how those that are more fragile or less supported, endure this on an ongoing basis. It is difficult to believe that so many experienced people could have been so reckless and dehumanising in caring for someone that depended on them. Staff within these institutions find it difficult to understand that they act in ways that have racist effects. They often want to blame the victim for making the wrong choices without acknowledging inequalities and their own internal racism.

CONCLUSION

A recognition of the problem created by racism and psychiatric misdiagnosis and its manifestation is essential. Psychotherapists and other psych professionals, will soon be working with the next generation, the generation of children of refugees, asylum seekers, and migrant families. Trauma in the form of multiple losses, stresses, abuse, and physical and emotional molestations as well as socioeconomic factors, education, fear, and anxiety will influence disease development. Instead of waiting and treating complex personality disorders as psychiatric disorders, often unsuccessfully, early therapeutic intervention would offer an opportunity to prevent psychiatric disorders.

We can provide adequate and supportive environments and not further traumatise the already traumatised. Disorders that have genetic and environmental components, often have more to do with colonisation, wars and conflict torn countries as a result of trans generational transmission of oppression, manifest as stress and anxiety disorders. They have a better chance of a cure with early therapeutic intervention as early as the trajectories towards disease will not yet have been established.

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