

Afeefah Haque, Eshal Awan

Ghada Aly

Calgary Youth Science Fair 2024

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### Mental Disorders in Gen Z Logbook

Saturday, Dec 9, 2023

This was the day that we signed up for the science fair by emailing Mrs. Aly to let her know we were interested in participating. Shortly after, she added us to the “High School Science Fair 2024” Google Classroom, in which she posted multiple resources and updates as the science fair progressed.

Tuesday, Dec 12, 2023

On this day, we were brainstorming ideas about the topic we wanted our science fair project to center around. After a bit of deliberation, we agreed that we wanted our science fair to be centered around mental health and Gen Z. Additionally, we listed down several subtopics we would be interested in discussing, including different types of mental disorders and comparing how they were perceived in the past compared to today. Afterwards, we shared our idea with our Vice Principal Mrs. Elkestawi, who loved our idea. Furthermore, she suggested that we could conduct various research studies to collect data for our science fair. This was also the day that we created a google document titled “2024 Science Fair Project: Mental Disorders in Gen Z”. This is the document that we continued to brainstorm ideas, type out our research, and list our sources. Additionally,

we created this very logbook document and began adding what progress we made already.

Friday, Dec 15, 2023

We emailed Mrs.Aly the topic we decided upon for our science fair project. In addition to this, we emailed Mrs.Aly and Mrs.Elkestawi our idea for the research studies we were interested in conducting. One idea we had was creating a slideshow about mental health and disorders and presenting it to all the grade 6-8 classes in our school. Even from the beginning, we knew this would take an enormous amount of time and dedication because there were 10 of these classes in total (6A, 6B, 6C, 7A, 7B, 7C, 8A, 8B, 8C, and 8D). Another idea we were interested in bringing to fruition was a survey about mental health for the grade 9-12 students in our school to fill out. We believed that this idea would be more pragmatic since it would only require us to create a survey, and then contact Mrs.E or Mrs.Aly to post it onto our collective high school google classrooms.

Saturday, Dec 16, 2023

Eshal created the 9-12 survey survey on google forms with questions spanning from current mental state to sources of stress and diagnosed medical disorders. She then emailed the survey to Mrs.Aly to send us feedback once she took a look at it.

Additionally, we began working on the slideshow we would present to the students next week. This slideshow included some simple background information regarding mental health and mental disorders, as well as a brief overview of the mental

disorders we were planning to talk about (depression, anxiety, ADHD, PTSD, BPD, anorexia, and bulimia). We had a difference in opinion when it came to which slideshow template we would choose. However, after strenuous deliberation, we eventually decided upon Eshal's choice. After we wrote what information we had, we copy and pasted it into our main research document for future reference.

Furthermore, we were discussing what activity we could do with the children after our presentation. We wanted to do something that was fun, educational, and engaging, yet didn't require a lot of preparation, money, or time. After sorting through several worksheet handouts and educational blogs, we eventually decided on a simple role-play idea. We would have the students split into groups of 4-6 and give them 10-15 minutes to prepare depending on how much class time we were allotted. Then, for the remainder of class time, they would present their play to the class. We figured that an activity as simple as this fulfilled all our requirements, and the only items we would need were a few props for the students to include in their plays.

Sunday, Dec 17, 2023

On this day, we finally finished the entirety of our presentation. We included information about various factors that contribute to mental disorders as well as ways in which students could take care of their own mental health. Once we completed proofreading and adding the finishing touches, we exported the presentation to Mrs.Aly and Mrs.E i for feedback. In addition to this, we copy and pasted whatever new information we included in our presentation to the main research document.

Monday, Dec 18, 2023

On this day, we had the opportunity to speak with Ms.E in-person about our presentation. She told us that overall she was impressed with the amount of detail we put into our work. However, she recommended that we shorten how much information was in our slideshow. Ms.E explained to us that the purpose of a slideshow is to emphasize our main points in a visual format and that the bulk of our information should be spoken. As for our idea of doing a grade 9-12 survey and grade 6-8 presentations, she gave us her stamp of approval as long as Mrs.Aly allowed it since she is the school's science fair coordinator.

Near the end of the school day, we had a chance to discuss our project ideas with Mrs.Aly. Firstly, we asked about when, where, and how much the CYSF sanctioned trifolds cost because we wanted to begin working on our's as soon as possible. In response, Mrs.Aly informed us that she wasn't quite sure about the details at that moment, but she would check with the front office soon and update us when she was sure. Secondly, she told us that she didn't think launching a survey about mental health to the students would be a great idea because many of the questions were extremely personal, which would result in many students unwilling to participate or not being honest. As for our presentation, she gave us the same feedback that Ms.E. Thankfully, Mrs.Aly said we were allowed to go forth with presenting to the grade 6-8 students, but we would need to talk to their teachers ourselves and discuss timing and scheduling. Additionally, she told us that any student who we presented to would be required to sign a specific CYSF form since they would technically be considered "experiment participants".

After speaking with Mrs. Aly and grabbing a copy of the CYSF experiment participant form, we headed down to the front office and printed around 80 copies. Afterwards, we visited all the grade 6 classrooms in the school. In each of these classrooms, we spoke with the teacher and decided on a block to meet the following day. Then, we spoke to the students and explained to them what we would be doing and that we would be coming in the following day.

Once we got home, Eshal emailed each of the grade 6 teachers to confirm their timing. Furthermore, she emailed every other grade 7 and 8 teacher explaining to them our project and what time we could come in if they were willing to lend us their class time. Meanwhile, I revisited the slideshow and edited down the information to simple and digestible bullet points.

Additionally, we both had to email our own teachers and let them know that we were going to miss some, if not all of their classes that week in order to present to these students. Especially in high school, missing even one class can be extremely challenging to make up for. Although it was most definitely a difficult sacrifice to make, we knew that this was something we had to do in order to make this project idea a reality.

Tuesday, Dec 19, 2023

On this day, we visited all 3 grade 6 classes and spoke with them about mental health. Initially, we were quite nervous that the students would be greatly disrespectful and uncooperative. However, working with the 6th graders was probably the best experience we had throughout this entire endeavor. Firstly, they defied our expectations by showing immense respect and politeness towards us. In addition to this, they were

massively interested in our topic, especially when it came to the different types of mental disorders. We had no problem getting them to participate, whether that be through them asking intriguing questions related to mental health, or when we were asking them questions to gauge their understanding. We could tell that the majority of the students thoroughly enjoyed and learned a lot from our presentations. Additionally, the plays that they came up with were absolutely hilarious and we had a blast watching them. As a reward for their outstanding behavior and token of our gratitude, we gave them some milk chocolates at the end of our time with them.

Once we returned home, Eshal continued to network with other teachers and schedule what classes we would present to tomorrow.

Wednesday, Dec 20,2023

On this day, we had 7C, 8D, and 7A to present to. Our first class of the day was 7C, which was an absolute disaster to say the least. Although there were some students that were well behaved and genuinely wanted to learn, most of the students were extremely disrespectful towards us. Throughout the course of our presentation, they would constantly yell and scream or make inappropriate jokes. Despite our best efforts to get the students to pay attention, they continued to act carelessly. Even their teacher scolding them multiple times didn't stop them from disregarding our presentation. Ultimately, we powered through our presentation in spite of their inconsiderate behavior and left without completing the activity with them. We decided that if they weren't willing to value our time, we simply wouldn't spend it with them.

Although our time with 7C left a bad taste in our mouths, we didn't let it deter us from remaining steadfast in our goal of presenting to all the classes we had planned. We knew that when working with students, it was expected for some of them to behave in an impolite manner. We were aware that this was simply one of the many obstacles that are posed by working with children, and therefore why good experiences with them are so much more gratifying. During this challenging instance, we thought back to our time with the 6th graders the day before, and how accomplished we felt after working with them. We figured that we couldn't let one bad experience cancel out three good ones and the possible many more we could have as long as we stayed resilient.

After taking a break, we went to the 8D classroom and gave our presentation. When we first entered the classroom, they were behaving extremely chaotically as it was nearing the end of their lunch block. However, as their teacher got them settled down, they proved themselves to be quite respectful as they displayed moderate interest in what we were speaking about. Although there were a few times that they acted out of line, those moments were few and far between. The 8D students' plays panned out more or less the same. Overall, our experience with the 8D class was well-spent as we didn't have too many major issues with their behavior.

Our final class of the day was 7A. The first thing that we noticed about these students was that they were significantly louder and more disorderly than the 8D class we had beforehand. However, they were not at all disrespectful like the 7C class earlier in the day was. Although these students were often disruptive when they yelled out questions and facts, it was clear that this was because they were passionate about mental health and eager to share their knowledge on the subject. Although it was somewhat annoying at

certain points, we genuinely appreciated their eagerness to learn from us and have a discussion. Unfortunately, their continued interruptions resulted in us taking longer to complete our slideshow and consequently, we didn't have enough time to do our class activity with them. We were actually quite disappointed with this news just as much as they were because we truly enjoyed our time with them as a class and we would have loved to witness the plays they could've come up with.

Once we returned home, Eshal continued to email the teachers of the remaining classes and schedule who we would present to the following day.

Thursday, Dec 21, 2023

This was the final day we had to present to classes before winter break began. The classes that we had on the agenda were 8A and 8C. Unfortunately, we were unable to fit any other classes into our schedule because both of us had two finals to attend to that day. As for the classes we couldn't make time for, we tried our best to reschedule with their teachers to the best of our abilities. For 8B, we spoke with their homeroom teacher and rescheduled our time with them to be on January 9th, the Tuesday after we returned to school from winter break. On the other hand, we tried rescheduling with the 7B homeroom teacher through email, but she never ended up replying, which meant we couldn't present to them.

Our presentation with 8C had a rocky start. The students behaved in an increasingly disruptive and disdainful manner, which made it difficult to continue our presentation. By the end of our presentation, I felt like leaving the classroom the same way we did with 7C the day before. However, Eshal took it upon herself to announce the

activity with the class anyway. Although the 8C students' plays were most definitely chaotic and almost dangerous as a result of running into desks, overall they were admittedly entertaining.

To put it concisely, presenting to 8A was a blast. Similarly to 7A, they were extremely rowdy but not rude in any way. We got along amazingly with each of the students, who were extremely enthusiastic to have us with them. In addition to this, their plays were certainly the most entertaining ones out of any class, including the 6th graders. One of our most memorable moments with them was when a group showed how different people treat an individual with a mental disorder in both respectful and unacceptable ways. Not only were their plays' concepts more unique and varied to other classes, but their execution left us in stitches. Without a doubt, the 8A class had some of the most amusing students we've worked with throughout this entire project, and they were the best way to end off our final school week before starting winter break.

However, before we left the school, we paid a visit to Mrs. Aly's classroom as courtesy of an email she sent us the day prior. Once there, we followed her into a storage room and collected our brand new, gigantic, plain white trifold. Although it was definitely a minor inconvenience to maneuver around with a piece of cardboard rivaling the surface area of 3 doors, we were able to get it home safely without decapitating a single person.

Tuesday, Jan 9, 2024

This was the day that we were supposed to present to the 8B class. However, their homeroom teacher was not at school that day. Considering the fact that we only had a

week of school before exam break and we desperately needed to begin preparing for our exams, we came to the conclusion that presenting to the 8B class would not be a sound academic decision. As a result, we decided to end our mental health presentations here. Although we unfortunately weren't able to present to all 10 classes, we ended up presenting to 8 in total.

Saturday, Jan 27, 2024

On this day, we began working on the research component of our project. We started off by creating a project outline listing all of the topics, subtopics, and specific information we needed to research. Once we created our outline, we wasted no time in beginning our actual research. By the end of the day, we had completed writing our introduction, our first section all about the most common mental disorders in Gen Z, our second section about the history of mental disorders, and our fourth section detailing our presentations to the 6-8 students in our school.

Sunday, Jan 28, 2024

On this day, we completed researching the remaining topics of our project. These topics included section 3, which covered the factors contributing to mental health in Gen Zers, and our conclusion.

Sunday, Jan 29, 2024

This was the day that we proofread all our information and made edits where they were needed. Additionally, we scoured the web for a plethora of images that we could

display to the judges on the day of our in-school science fair. Once both of those were completed, we printed out our information and images and placed them in a binder for the school science fair.

Monday, Jan 30, 2024

This was the day that our in-school science fair was held. All the work we did for the past month and a half, from presenting to the 6th-8th graders in our school to seemingly endless hours of typing and researching led up to this moment. Going in, we were unbelievably nervous about getting judged. We were aware of just how hard we worked and the numerous hours we sunk into the project. We didn't want any of our strenuous efforts to be in vain, and that all depended on how we would perform before the judges on this day.

Our first judging experience went moderately well. We are able to confidently present our information in a coherent manner as well as clearly answer any of the questions the judge posed to us. As for feedback, the judge agreed that we did great in terms of information but suggested that we shortened our presentation because it took nearly 15 minutes in total.

Having completed our first judging, we were feeling more self-assured about our abilities. However, our second judgment was something we didn't foresee at all.

We presented our project in a similar fashion to how we did it the first time. By the end of it, we thought we did pretty well until our judge brought up the fact that she was actually a university student studying the exact topic we were talking about. She told us that she purposefully didn't mention this to us at the beginning of our presentation

because she didn't want to scare us. However, even if we weren't scared before, without a doubt we were now. Our judge continued by pointing out every informational inaccuracy in our research which made us extremely worried about the proficiency of our work. Not to be mistaken, our judge was extremely kind and understanding even when providing us with criticism. She let us know that she didn't expect us to know everything about a subject most scientists are still vastly unfamiliar with. Additionally, she told us that if we did make it to CYSF, her feedback would be exceptionally helpful to implement in order to improve our research.

Despite our second judge's thoughtful and considerate nature, we were left feeling dejected and regretful about our research. We knew we put our heart and soul into this project, but we weren't sure if that would be enough to even get accepted into CYSF. At this point, the only thing that we could do now was wait.

Thursday, Feb 8, 2024

The school science fair winners were announced on the school's intercom on this day. Thankfully, our names were included, which meant we qualified for the city science fair. We breathed a sigh of relief and collected congratulations from our friends and family for the rest of the day.

Saturday, Feb 10, 2024

Since we were confirmed to be heading towards the city science fair, we implemented the changes that our in-school science fair judge recommended. This included removing the ADHD subsection of our project because she told us that

according to the definition that we chose for a mental disorder, ADHD wouldn't be the same type of mental disorder as depression or anxiety because ADHD is usually a result of a physical deformity in the brain that is present at birth, whereas depression and anxiety have more to do with chemical imbalances that occur as a result of personal experiences.

Furthermore, we thought it would be a good idea to add a subsection about the brain in the beginning of our project before speaking about the various mental disorders. This is because we thought it would be beneficial to look at mental disorders from another scientifically based perspective. However, one revelation that we quickly stumbled upon was that the brain itself was a whole other Pandora's box when it came to the different parts and their functions. In the span of about 10 minutes, we discovered at least 5 different ways to divide up the brain's parts and their responsibilities. With how much information we discovered, we could have created an entire science fair project on the brain itself. As a result of this revelation, we realized that it would probably be best to not touch upon the brain at all. We realized that if we attempted to do so, we would either steer away from our main topic if we went too far in-depth, or would be vastly inaccurate if we didn't explain it intricately enough.

Sunday, March 10, 2024

On this day, we proofread and edited our information one last time before submitting it to the CYSF platform website. Additionally, we filled out every other topic we could within the platform. We decided to keep the "data" and "method" topics empty because we were doing a research project and were unsure of what to fill into those boxes

since they seem to be meant for experimentation projects. Even after contacting Mrs.Aly with our conundrum, she informed us that it would be fine to leave it blank and to fill in as much as we can with the information we have.