

# CAMPUS

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**REWARDING YET RELENTLESS**  
**THE CHARTERED ACCOUNTANCY JOURNEY**  
**IN BANGLADESH**

ILLUSTRATION: MONG SHONIE

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## ANIME

# A SIGN OF AFFECTION

A heartfelt tale of connection and growth

MARINA MASUD

Suu Morishita's *Yubisaki to Renren* or *A Sign of Affection*, wins you over not with spectacle but with sincerity and a delicate portrayal of romance. The anime doesn't just tell you about love; it shows you how it feels even when words fall silent.

Produced by Studio Ajia-do, *A Sign of Affection* is a beautiful, light-hearted, cosy feel-good romance anime with a warm atmosphere and relatable characters. It follows the romance between the protagonist Yuki Itose, who has had hearing impairment since birth, and the lead male interest, Itsuomi Nagi.

The plot has its novelty in navigating through what is essentially a sensitive and often overlooked subject. However, the premise does not dwell in its heaviness. Instead of reinventing the wheel, it incorporates the theme in a simple yet beautiful manner, proving that a story with a heart can triumph one with extraordinary writing, subversions, and plot twists.

The main characters remain very expressive through their gestures and sign language interactions, as they get to know one another and broaden their horizons despite having different perspectives and sets of circumstances. And the parts where they perhaps lacked communication were made up through their best efforts to do



better and improve in their relationship.

What really sells a shoujo is its protagonist, and Yuki is a very likeable one with a very kind and sweet personality. She can sometimes seem naive, but I believe this is because of her surroundings and the concern many people have for her. I appreciate how Itsuomi helps her realise that there is more to explore in the world and encourages her to develop her own dreams.

Despite facing challenges, Yuki remains optimistic and continues to enjoy life, making

new friends and experiencing new things, especially after meeting Itsuomi. These two characters work really well together because, despite their differences, they complement each other and bring out the best in one another.

Being unfamiliar with the source material, I went in with zero expectations. But I was pleasantly surprised about how much I enjoyed watching each episode and the simple yet beautifully depicted blossoming of the characters and their journeys.

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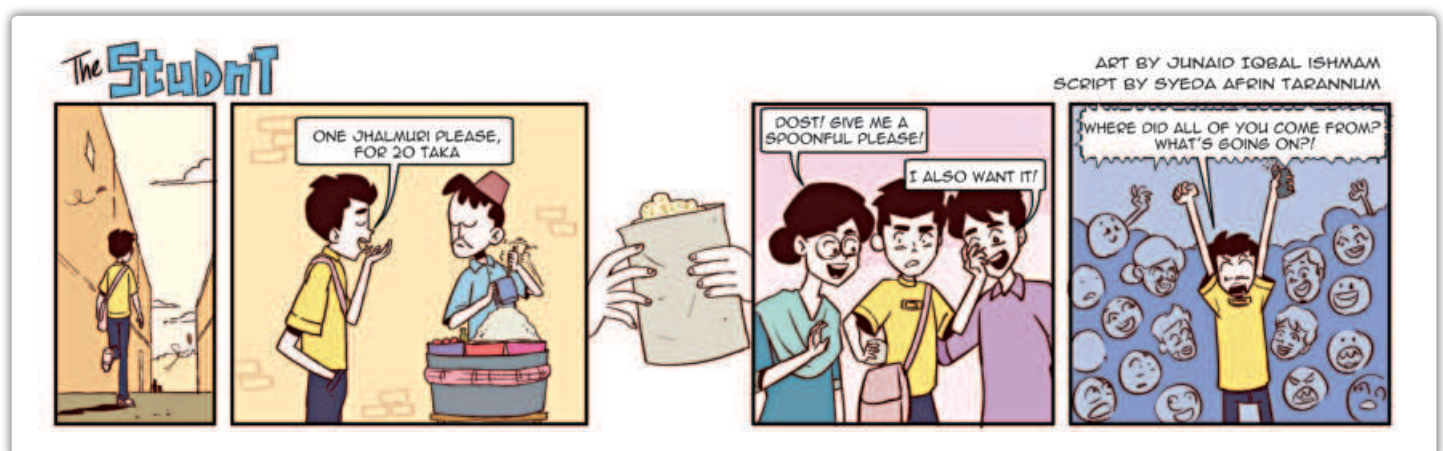
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CAREER

# REWARDING YET RELENTLESS

## The Chartered Accountancy journey in Bangladesh

Chartered Accountancy is one of the most prestigious and demanding qualifications in Bangladesh. This is due to the vital role played by Chartered Accountants (CAs) in auditing, taxation, and advising businesses, thus, contributing to the financial strength and transparency of both organisations and the wider economy.

TAZRIN RASHID PRITHA

Contrary to popular belief, CAs are not just employed in Chartered Accountancy firms. Multi-national corporations (MNCs), non-profit organisations, retail chains, and many other organisations also need CAs to run their operations – especially the financial side of things – smoothly.

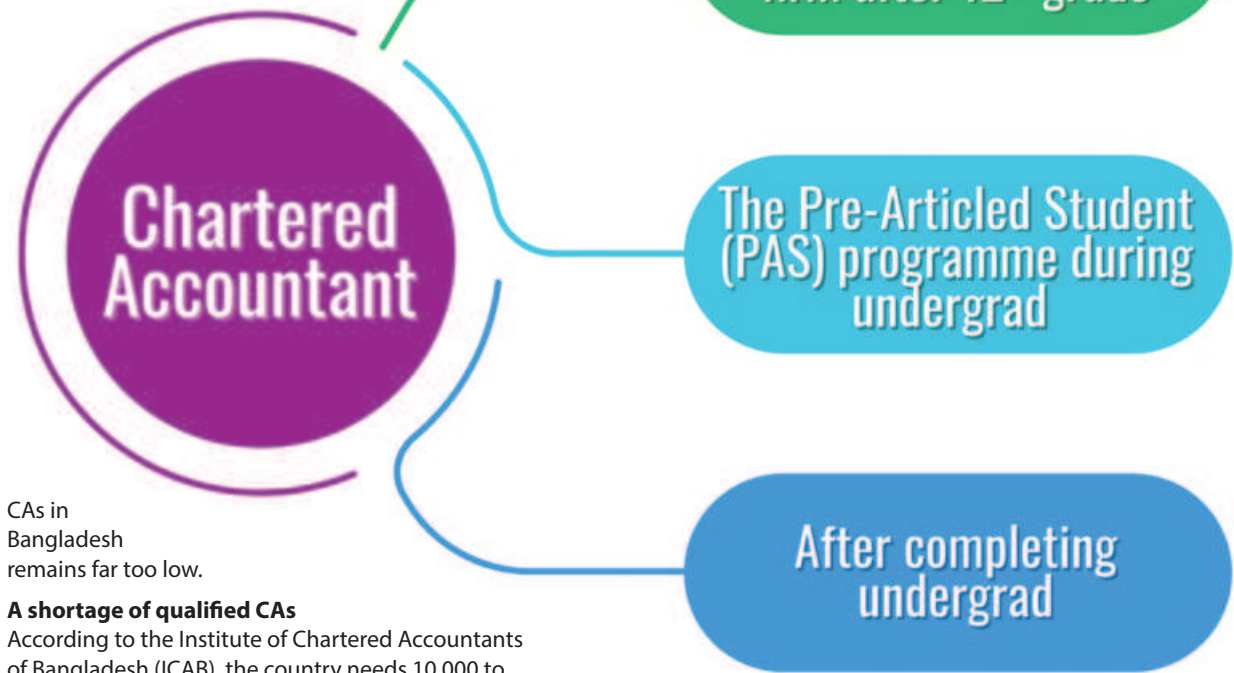
Yet, despite the rising demand, the number of qualified

and Finance, as many might assume. In fact, there are many routes one can traverse if they are looking to pursue a career as a CA.

**Pathways to becoming a CA**

Currently, there are three popular routes to becoming a Chartered Accountant. Some, like Ahmed Zabir, Associate Chartered Accountant (ACA), directly get admitted to a registered Chartered Accountancy firm right after HSC or A level.

### Three popular routes to becoming a Chartered Accountant



CAs in Bangladesh remains far too low.

**A shortage of qualified CAs**

According to the Institute of Chartered Accountants of Bangladesh (ICAB), the country needs 10,000 to 12,000 qualified professionals to meet the demands of its expanding economy. However, despite the growing demand, Bangladesh only has 1,967 CAs qualified by ICAB — the regulatory body that provides the professional qualification and sets the standards for chartered accountancy in the country — since the Liberation War. This is despite the fact that a CA qualification is open to students from all academic backgrounds and not just Accounting

and Finance, as many might assume. In fact, there are many routes one can traverse if they are looking to pursue a career as a CA.

According to Zabir, a lot of the materials covered in the Certificate Level ICAB Manual overlapped with his A level Accounting coursework. Hence, pursuing Chartered Accountancy right after A levels seemed the smartest and most feasible career pathway for him. According to Zabir, who is one of the youngest Chartered Accountants in Bangladesh, securing a decent, high-paying job can be



ILLUSTRATION: ABIR HOSSAIN

quite difficult even after pursuing BBA and MBA degrees. Zabir said, “The career projection in this profession is very fast. Qualified professionals often enjoy a six-digit starting salary. There aren’t many jobs in Bangladesh that pay as much, that too at the initial stage.”

Anwar Hossain, Fellow Chartered Accountant (FCA), a CA who also pursued this pathway after completing his 12th grade, said, “The financial rewards and prestige associated with this profession are well known by now. ICAB regularly organises training programmes and has signed MOUs (Memorandum of understanding) with Chartered Accountancy and Certified Public Accountancy (CPA) institutes in developed countries, enabling Bangladeshi CAs to work abroad through skilled staff programmes. In recent years, many chartered accountants have moved to first-world countries, and ICAB has played a vital role in shaping them into the well-rounded professionals they are today.”

After completing HSC or equivalent exams, students can join ICAB if they have a minimum aggregated GPA of 8.0 (for SSC and HSC) or an equivalent O/A level score. They then apply to ICAB-registered CA firms to begin a four-year articleship, starting with a probation period. During the articleship, students gain practical experience in auditing, taxation, and financial reporting while studying for ICAB’s three exam levels: Certificate, Professional, and Advanced. However, those who directly pursue Chartered Accountancy after 12th grade miss out on the experiences of university life, and the transition from a classroom to an office directly can feel quite gloomy.

“It’s almost as if I transitioned into a grown adult overnight,” said Zabir. “From going to coaching centres for tuition, hanging out with my friends, and stressing over quizzes, I was suddenly expected to chase after deadlines, attend meetings, engage in on-the-job learning, and negotiate with clients. I felt like I completely skipped a chapter of my life. Most of my batch mates from school are in university now, and I just can’t relate to them at all. It feels as if we are on completely different timelines.”

To make it easier to pursue Chartered Accountancy for students who don’t want to sacrifice having a university life, the Pre-Articled Student (PAS) programme was introduced by ICAB in September 2021. The PAS programme allows students to register with ICAB and start studying for the Certificate Level exams while still in university, appear for Certificate Level exams without being registered with a CA firm, and receive academic exemptions and recognition for completed exams when

they eventually join a CA firm for articleship. Ahmad Muhtasim Ishraque, a BBA student enrolled in a public university, said, “Although the students studying at my department are allowed an exemption of four subjects out of seven in Certificate Level, I chose to not go for the exemptions. My university allows students not only from Science but also from Humanities to get admitted here. As a result, a lot of the courses in our first and second years are diluted and simplified to make it easier for them to grasp. Most of the courses that we got an exemption from were taught in our early years at university. Hence, I soon figured that I would have to start studying from the Certificate Level ICAB manual anyway to pass my Professional Level exams. So, I appeared for all seven exams in Certificate Level as I would, either way, have needed to pay the registration fees for the courses I have been offered an exemption.”

In order to ensure that all students are on the same pace, ICAB arranges mandatory lecture sessions for students to attend. How fruitful these classes are and whether they are able to deliver what was expected of them are up for debate. Ishraque said, “I have noticed a lack of coherence in the lecture flow. Different teachers take classes for the same course and cover whatever they wish to without following any order. These teachers, who are CAs themselves, might be amazing as CAs, but a lot of the time, they don’t really have a knack for teaching. They utilise the lecture hours as an ice-breaking session instead.”

Moreover, the academic structures at most universities are rarely flexible. In case the CA exams clash with any sort of academic obligations, students are left to choose either one, and it is usually not possible to negotiate with the authority to reschedule the quizzes or exams at a later date. This discourages many university students from pursuing this particular Chartered Accountancy route.

Finally, the remaining aspirants pursue Chartered Accountancy after completing their bachelor’s degree, having utilised their university years to explore who they are as individuals and which career pathway would be a good fit for them. This also has its potential downsides, one of which is the allowance offered during articleships.

**The articleship allowance challenge**

The allowance offered by most Chartered Accountancy firms during the articleship period is considered extremely low compared to standard living costs. The starting allowance for a first-year articled student is BDT 7000 as set by ICAB. Many aspiring CAs hesitate to embark on this route as the allowance scale makes it challenging to sustain

“An associate at a large audit firm once fainted at the office and had to be hospitalised,” said Rishad\*, an articled student. “The work culture is often fast-paced, and breaks can feel limited, which may lead to burnout according to some students”

in a city like Dhaka. The exams are also quite rigorous, and sometimes, it can take multiple attempts to clear a paper. Combining both of these factors, it can be quite difficult for aspirants to hold on to the CA career path.

Regarding the allowance, Anwar notes, “I agree that the ICAB minimum articleship allowance is low compared to Dhaka’s living costs. However, it’s important to remember that this is just the minimum, not the maximum. To attract talented students to the profession, many firms now offer higher allowances, especially to those with strong academic records. Some firms even cover registration costs and exam fees for students who pass fully, partly, or subject-wise during their articleship. Additionally, ICAB provides Quard-e-Hasana, an interest-free loan, to support brilliant but financially constrained students. The low allowance often reflects the generally low audit fee culture in Bangladesh. Ideally, if audit fees were increased, it would create scope for higher allowances.”

However, raising audit fees can create several challenges in a country like Bangladesh, with the most crucial one being that businesses would avoid audits altogether. This lack of transparency can lead to fraud and corruption, which is likely to erode local and foreign investor confidence.

**Struggles faced by women in the CA profession**

As explained earlier, Chartered Accountancy is a demanding career path, but for women in Bangladesh, the journey often comes with additional social and cultural hurdles that make it even more challenging.

“The number of CAs in Bangladesh is far below the

required level, and the number of qualified women CAs is even lower, with only 159 (as of July 2024) across the entire country,” said Sabah Alam, ACA, an alumnus of Bangladesh University of Professionals (BUP). “I was one of the first CAs to qualify from my university, and unfortunately, the numbers haven’t grown significantly since then. One of the main reasons behind this is the additional hurdles women face along the way. For instance, many women are pressured to get married earlier than their male counterparts, often right after graduation. When that happens, new responsibilities and challenges arise, making it incredibly difficult to prepare for such a mentally demanding professional degree. From this perspective, pursuing Chartered Accountancy is still a privilege.

Another overlooked fact is that the working environment for CA students in firms can be quite unpleasant sometimes.

“An associate at a large audit firm once fainted at the office and had to be hospitalised,” said Rishad\*, an articled student. “The work culture is often fast-paced, and breaks can feel limited, which may lead to burnout according to some students”

“On top of offering very low pay for such draining tasks, many firms tend to find reasons for small deductions,” Rishad added. “Earlier this year, a group of articled students were involved in an accident on the premises while hurrying to avoid being late, as lateness could result in losing an entire day’s allowance. Despite concerns raised by students, the firm continued operating under less-than-ideal conditions. Management often frames certain policies as measures to ensure smooth operations and promote professionalism and punctuality among students. However, when such policies are enforced without taking genuine concerns into consideration, they can feel exploitative to some.”

Despite the challenges, Chartered Accountancy remains one of the most rewarding professions in Bangladesh, both financially and in terms of prestige. As the demand for qualified CAs continues to grow, it is vital for both ICAB and firms to work together to make the journey more accessible and sustainable for aspiring professionals.

#### Reference:

ICAB (July 1, 2024). *ICAB - Membership Statistics*.

*\*Name has been changed upon request*

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## NOTICE BOARD

# IUB alumni Intishar and Peash selected for Bangladesh National Futsal Team

Intishar Mostafa Chowdhury and Foayej Ahammed Peash, two alumni of Independent University, Bangladesh (IUB), have been selected in the final 14-member squad of the Bangladesh National Futsal Team for the upcoming AFC Futsal Asian Cup 2026 Qualifiers in Malaysia. Intishar has also been named Vice-Captain of the team.

Their selection was confirmed following a three-phase national trial process conducted by the Bangladesh Football Federation (BFF), which began with over 630 participants from across the country. Intishar, an alumnus of the Department of Media and Communication, will feature as a midfielder, while Peash, a former student of the Department of Finance, plays as a forward. Meherab Hossain Opi, a current student of Accounting, had also advanced to the second phase of trials but was not selected in the final squad.

The final 14-member squad will represent Bangladesh in its debut appearance at the AFC Futsal Asian Cup Qualifiers, scheduled to take place in Malaysia from September 16 to 24, 2025. Bangladesh has been drawn in Group G alongside Iran, Malaysia, and the United Arab Emirates (UAE).



All three players trained under the IUB Football Club (IUBFC) and have competed in various national and international futsal competitions. Their previous achievements include winning titles in the Bangladesh Corporate Premier League, Futsal Premier League, FIFCO Corporate Premier League, NSU Sports Carnival, Wings

Uni Futsal, and IUT OIC Football Tournament. Intishar and Peash were also runners-up in the Manchester City Corporate Cup held at Etihad Stadium, England, in 2024. All three were part of the champion team in the Bangladesh Futsal Premier League (BFPL).

"Our selection reflects years of training and competitive experience at both university and corporate levels," said Intishar.

"IUB played a big role in our journey," said Peash. "From grooming us through the IUB Football Club to giving us access to tournaments and facilities, the support we received made a real difference."

Vice Chancellor Prof. M Tamim said, "Congratulations to Intishar and Peash on this wonderful achievement. It speaks volumes about their dedication and hard work. At IUB, we believe education goes beyond the classroom. It's about giving students the space to discover and grow their talents. Their success reflects what IUB truly stands for."

The AFC Futsal Asian Cup is the continent's premier futsal championship organised by the Asian Football Confederation (AFC). The 2026 edition will determine the Asian qualifiers for the FIFA Futsal World Cup.



## AIUB Social Welfare Club-Shomoy organises "Rongin Shomoy 2025" for underprivileged children at Kathpencil Pathshala

On September 6, the AIUB Social Welfare Club-Shomoy, with the support of the Office of Student Affairs (OSA), American International University-Bangladesh (AIUB), organised a day-long event titled "Rongin Shomoy 2025" at Kathpencil Pathshala – a non-profit organisation dedicated to the education and well-being of underprivileged children.

The programme was inaugurated and graced by Nadia Anwar, Founder Member and Chairman, Board of Trustees, AIUB, along with Prof. Dr Manzur H Khan, Proctor, AIUB. The day was filled with cultural performances, painting sessions, fun activities, and the distribution of colourful custom-made dresses, school bags, and stationery items among the students of Kathpencil Pathshala.

## MIST BLITZ SET TO PARTICIPATE IN FORMULA STUDENT CHINA 2025

FATIMA ASHRAF

The student Formula team from the Military Institute of Science and Technology (MIST), MIST Blitz, will be taking part in Formula Student China in Henan province, Zhengzhou this October. Within a year, the crew had built their automobile and successfully test-drove it in August, demonstrating how far they had come in such a short period of time despite their inexperience.

Many in Bangladesh still confuse Formula Student with Formula 1, but the two are very different. Formula racing is not limited to Formula 1; there are also Formula 2, 3, 4, 5, Formula E, and Formula Student. While Formula 1 is a professional motorsport, Formula Student is an international engineering competition where university students design, build, and race small single-seater cars.

The focus is not just speed but also design, innovation, efficiency and engineering skills. Events are split into two parts: a static round where teams present their engineering design report to experts, and a dynamic round where cars must pass strict technical inspections before going on track.

MIST Blitz began last year but has already shown promise. At Formula Bharat 2024, they placed first in two static events. Though political instability prevented them from attending the occasion in person, they continued to grind, culminating in their first test drive last month. Building on this progress, their car uses an independent double wishbone suspension for stability and grip, an anti-Ackermann steering system refined through simulations, and a triangulated chassis built for strength and practicality.

Formula Student gives students hands-on experience in design engineering, vehicle dynamics, and problem-solving which they can take straight into the industry when they graduate, particularly as electric vehicles are expected to grow rapidly. In Bangladesh, where the

automotive sector is still focused on assembly rather than design, this exposure is rare.

However, looking ahead, Blitz plans outreach programmes in schools and universities to inspire future engineers. They also hope to expand partnerships with sponsors and the industry for both financial and technical support. For now, their focus is on China, where they will



PHOTO: COURTESY

compete alongside international teams, present their design to judges, and learn from the global Formula Student community.

Fatima Ashraf is a contributor for Campus, The Daily Star.

## OFF CAMPUS

# WHY ARE YOUNG PEOPLE RESORTING TO ONLINE PLATFORMS FOR MENTAL SUPPORT?

PUNOMI RAHMAN TITIR

According to a survey by the Achol Foundation, in 2024, at least 310 students from various educational institutions took their own lives. Nearly half of them were school-goers, and the vast majority fell within the 13- to 19-year age group. Yet, many parents fail to recognise the gravity of a child's mental health condition and thus, may hold the misconception that such issues can be resolved without seeking professional help. Due to the prevailing mindset surrounding mental healthcare, professional help remains largely inaccessible to young people, causing them to feel isolated and, at times, even helpless.

Raihan Kabir\*, 17, recalls how his attempts to open up about his emotional distress were dismissed as being ungrateful. "Trying to speak to my father is like talking to a brick wall. While he recognises that I am probably not in the right headspace, his solution to the problem is to always turn to a higher power. One of my relatives once told me that I should be thankful for being able to afford the necessities, and as many people aren't as fortunate. They advised me to focus on my studies instead."

He continues, "It's exhausting to have to explain myself over and over again, when no one seems to understand what I go through every day. After that, I stopped trying at all."

The ground for mental health discourse remains shrouded in misconception and stigma. In fact, being diagnosed with a mental disorder is still viewed through a lens of shame or even denial. In Bangladesh, digital platforms as informal avenues of seeking help have risen, especially amongst the younger demographic. This development underscores a profound gap between the access that's required and the kind that currently prevails.

As many young people lack the financial means, knowledge, or familial support necessary to access formal counselling, online platforms often become a substitute for professional help. These forums aim to provide a platform that allows individuals to share their personal experiences with each other, offer reassurance and well-meaning advice, and foster a sense of community.

"I'm not sure how to present the situation to my parents, and I don't think they would understand either. Speaking to strangers online who have endured similar

experiences as I did makes me feel less alone," says Samia Islam\*, a high school student at an English medium school in Dhaka.

To better understand how these platforms operate and work on maintaining a safe space for young members, including minors who rely on them for support, we spoke to Mursalin Hasan Chowdhury Alfie, admin of Healthy Minds — a popular mental health support group on Facebook.

She states, "We have a set of rules in place that all members are required to follow. For example, anonymous posts must include age and gender so that members, especially women, can decide whether they feel comfortable engaging. We maintain a rule that prevents men from commenting on posts made by women under the age of 21, considering the social context and risks women face online. We also have membership questions to keep out people who harbour contempt toward different communities. All requests are screened by our moderators to filter out prejudiced views. Members must add trigger warnings to sensitive posts, and we clearly state that the group is not a crisis helpline or a substitute for professional mental health care."

Aside from engaging with online communities, another form of mental health support has recently gained traction: the use of chatbots. The use of artificial intelligence (AI) chatbots to imitate therapy sessions as an alternative to seeing a licensed therapist is becoming a common practice.

Raya Hossain\*, 14, shares her experience, "There is an AI assistant designed for the sole purpose of serving as your therapist. I actually discovered its existence while scrolling through Instagram, and I find it to be quite useful. It can pick up on key points, ask follow-up questions, and sometimes even offer great advice. But a lot of the time, it also just repeats whatever I say or gives extremely generic responses like any other AI assistant. I'm aware that it's not a real person, but it makes me feel like someone is listening from a non-judgemental point of view."

Speaking to our respondents, many of them alleged that using AI-powered tools as a substitute for therapy is the most

accessible solution. To evaluate this claim, we reached out to two different experts in the field to hear their perspective.

Shermin Abedin, Senior Psychologist at Mindspace, stresses that AI should never be treated as a substitute for professional therapy. "In a therapeutic session, the way a counsellor listens, expresses empathy, maintains eye contact, uses tone, body language, and selects appropriate therapeutic tools, all of these play a critical role in healing. AI simply cannot replicate that human connection," she suggests.

"Instead, I would recommend identifying one or two trustworthy people, friends, family members, or mentors with whom they can share their feelings. These people should be reliable and respectful of confidentiality. In addition, teenagers can practice self-mapping exercises, identify their strengths, weaknesses, and opportunities, and work on developing their emotional and coping skills."

Sumaya Afrin Misti, a senior school Counsellor at the Aga Khan Academy, opines, "To make therapy more accessible to children, mental health support should not be viewed as an optional add-on but rather as an essential component embedded within the school curriculum. Schools that prioritise pastoral care and socio-emotional counselling play a vital role in normalising conversations around mental health and reducing stigma."

She adds, "Early identification and intervention for conditions such as Autism Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD), learning disabilities, and mood disorders are critical, and schools serve as the first point of observation and referral to clinical psychologists or psychiatrists. This not only facilitates timely and appropriate treatment but also fosters collaboration among educators, mental health professionals, and parents, ultimately enhancing the students' social and academic development."

Unfortunately, the notion that mental healthcare is a privilege is not inaccurate. This compels the youth to turn to alternative means. While the substitutes they turn to may offer temporary assistance, without the surveillance of trained professionals, they carry the risk of misinformation and unverified advice.

So, for individuals who are unable to obtain professional care, what other options remain?

Mehrin Simran, the Founder of Mindspace, an organisation working towards ensuring awareness regarding mental health, mentions emergency hotline services that work towards providing immediate emotional relief and guiding people toward the professional care they require. "Our organisation also extends this kind of support through Vent, our psychological hotline service, which offers confidential help from trained listeners with a background in psychology.

Volunteers of our immediate crisis intervention service respond through texting and call services, sharing helpful resources, and supporting individuals in taking the next step toward healing," she adds.

*\*Names have been changed upon request*

### Reference:

The Daily Star (January 19, 2025). *65pc of suicide victims among students are teens: survey*

PHOTO: ORCHID CHAKMA



## INTERVIEWS

# A PhD candidate's passion for Chemistry and pursuit of vaccine research

## CAMPUS DESK

Momota Akter is currently pursuing a PhD in Organic Chemistry in the Department of Chemistry at Michigan State University (MSU), where she is conducting vaccine research under the supervision of Prof. Dr Xuefei Huang and also serves as a graduate teaching and research assistant in the same department. She also serves as the General Secretary of the Bangladesh Chemical and Biochemical Association in North America (BACABANA), Michigan Chapter, a non-profit organisation dedicated to supporting students and professionals in chemical and biochemical sciences.

Campus sat down with Momota to talk about her research and life as a PhD candidate.

**Campus (C):** *Chemistry is a difficult subject, one that's feared by many, especially in school. What made you pursue this subject for your higher studies?*

**Momota Akter (M):** Chemistry often seemed intimidating—its equations and formulas appeared complex and overwhelming. Yet, that very challenge drew me toward the subject and sparked my determination to explore it deeply.

Over time, I realised that chemistry is not confined to textbooks; it is intricately connected to everyday life. I have always been curious about how medicines are developed, how materials are created, and how small scientific changes can have a profound impact on the world around us. This realisation inspired me to pursue chemistry in higher studies, believing that if I could master it, I would not only build my career but also contribute meaningfully to society and my country.

Even though my school lacked sufficient resources, I nourished my curiosity by watching science programmes on television, which deepened my fascination with the subject. That curiosity, coupled with a desire to understand the science behind everyday life, drove me toward a career in research chemistry.

My parents, especially my father, played a pivotal role in nurturing this passion. He often shared stories of remarkable inventions and ground-breaking discoveries, and those stories fueled my resolve to follow this path.

**C:** *What's a typical day like as a PhD candidate who is also having to balance graduate teaching and research assistant roles?*

**M:** Being a PhD candidate means constantly balancing lab work, teaching, and personal life. The most interesting part is that no two days ever look the same. The workload can be intense, but with good time management and a clear sense of purpose, it is possible to maintain a healthy balance and still enjoy the journey.

There are weeks when deadlines and experiments demand extra hours, but I try to offset that with breaks, family time, or hobbies to recharge. The reward is worth it because you're not only doing research; you're also building resilience, discipline, and the ability to manage multiple responsibilities at once. I prioritise tasks based on urgency and impact, and I follow a structured schedule that allows me to dedicate time to both research and teaching.

**C:** *We understand that you are currently working on a vaccine at MSU. Could you tell us what this vaccine is and what it aims to do?*

**M:** Enterobacteriaceae is a large family of gram-negative bacteria. These bacteria are associated with both intestinal and extraintestinal diseases, including urinary tract infections, bloodstream infections, pneumonia, and, in some cases, diarrhoea. Alarming, several strains of Enterobacteriaceae have developed resistance to antibiotics. Of particular concern is Carbapenem-resistant Enterobacteriaceae (CRE), which is resistant to carbapenems, often considered the drug of last resort.



PHOTO: COURTESY

The rapid rise of CRE highlights the urgent need for new preventive strategies.

Enterobacteriaceae produce a polysaccharide known as the Enterobacterial Common Antigen (ECA), composed of repeating trisaccharide units. This polysaccharide helps protect the bacterial outer membrane, serving as a virulence factor that enables infection. These unique features make ECA an attractive target for vaccine development. My research focuses on synthesising this antigen to develop a universal vaccine against Enterobacteriaceae, with a particular emphasis on combating antimicrobial resistance (AMR).

AMR is a growing global health crisis, increasing healthcare costs, patient morbidity, and mortality rates. CRE represents one of the most dangerous examples of drug-resistant infections. My goal is to address this challenge by creating innovative, scalable, and cost-effective vaccine platforms. This work aligns with global health priorities, including the World Health Organisation's (WHO) call for equitable vaccine access, and offers solutions for both advanced healthcare systems and resource-limited settings.

**C:** *Do you think it is possible to work on similar vaccines in Bangladesh?*

**M:** I firmly believe that similar vaccine projects could be undertaken in Bangladesh. For instance, the International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b) has played a significant role in vaccine research and infectious disease control.

Moving into glycoconjugate or bacterial vaccine research is feasible, but several factors need to be considered: investment in synthetic chemistry and bioconjugation facilities—a major gap currently in Bangladesh—collaboration with international research groups for technological support, and support from the government and non-government organisations (NGOs) for funding and regulatory guidance.

**C:** *When applying for your PhD at MSU, what were the things you highlighted in your application?*

**M:** In 2021, I applied to several universities in the US but received an offer letter from only one institution. Due to personal reasons, I did not join at that time. The following year, I applied to eight universities and received multiple offers. Ultimately, I accepted the PhD offer from MSU, which came with full financial support, because of the university's

ranking and the fact that the research work of Prof. Dr Huang aligned closely with my interests.

After completing my master's in Organic Chemistry, I decided to pursue research in bio-related fields. Initially, I identified potential research areas and supervisors by thoroughly exploring the websites of American universities. I sent emails to professors outlining my research interests, experience, CV, and brief proposals. Several professors expressed interest and conducted discussions via Zoom meetings, providing guidance for my applications.

I then carefully prepared and submitted the required application documents according to each university's guidelines. Following the submissions, I was invited for online interviews by several universities. During these interviews, I discussed my research plans, interests, and future goals. After evaluation, I received offers from multiple universities.

In an SOP, it is essential to highlight academic achievements such as undergraduate performance, GPA, honours, awards, or scholarships. More importantly, research experience must be emphasised—detailing specific projects, technical skills, and any conference or symposium participation. Applicants should also mention professors whose research aligns with their interests and explain their motivation to contribute to global scientific progress while also making a meaningful impact in Bangladesh.

**C:** *What advice would you give to aspiring PhD candidates from Bangladesh?*

**M:** My advice is to remain persistent and dedicated while building a strong foundation in core subjects such as Mathematics, Physics, Chemistry, etc. Engage in research projects, internships, and scientific competitions early to gain real-world exposure and sharpen problem-solving skills.

For Chemistry students, go beyond memorisation—focus on understanding the principles behind reactions, developing hands-on laboratory expertise, and cultivating critical thinking. Stay curious, keep up with the latest scientific advancements, and strengthen your ability to communicate research clearly through writing and presentations. Most importantly, embrace both successes and setbacks as part of the journey, stay resilient, and never lose your passion for discovery.