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Internet chat based intervention as a mode for therapy and counselling

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Abstract

Increasing mental health issues in India demands for a strong intervention to curb the rise. According to the World Health Organization, roughly around 21 Indians out of 100,000 die by suicide every year. The burden on mental health domain increases due to the existing system as most of the existing services follow a traditional approach and are most sought after but lack reachability and ease of access. This study recognises the need for programmes that help in reachability and ease of access while simultaneously maintaining anonymity, therefore, analyses the impact of chat-based therapy provided online through the platform. The paper analyses the difference in subjective unit of well-being (SUW) pre and post chat-based sessions among 2624 college students and 805 corporate employees. The Wilcoxon signed rank test between pre and post intervention indicates significant results with the $p < 0.001$ ($Z = -44.100a$) suggesting and increase in SUW scores post intervention. Further, the Kruskal–Wallis test revealed that the gender of the clients has an association with the SUW scores ($p < 0.05$). It was also found that the duration of the sessions had a positive relation with the impact scores ($p < 0.001$).

Impact statement

The rise in mental health issues throughout India is concerning and despite availability of mental health services across the districts in the country; accessibility, stigma and lack of resources act as a constraint in availing these services. Barriers to traditional methods of counselling include privacy issues, higher costs and transport issues (Doss et al., 2017; Ollerton, 1995). In India, stigma and discrimination related to mental health issues prevent individuals from seeking help (Shetty, 2023). The number of rising cases, especially among young individuals, suggests a requirement for early intervention to be carried out across India to help reach people despite the constraints. Since the young population display an increased usage of the internet, making use of such activity to promote well-being of the individuals may help in bridging the gap between the receivers of mental health services and the individuals who seek it. Since the medium of the service deviates from the traditional face-to-face counselling provided, determining the well-being scores pre- and post-chat-based sessions across various problem areas, helps to determine whether the chat-based therapy has a positive effect on the well-being of the individuals. The lack of research carried out in such a context in India calls for a study to be carried out to determine the impact levels of the synchronous online chat-based counselling offered. It was found that the chat-based counselling increased the well-being of clients who availed the service and further, duration and gender influenced the impact on well-being levels regardless of the problem area faced by the clients. Such a service can be offered to a larger population across several problem areas faced by the individuals.

Internet chat-based intervention as a mode for therapy and counselling

Background

India is a diverse and culturally rich country with strong religious, linguistic and traditional roots. As a developing country with substantial contributions to research, technology, infrastructure and healthcare, the country faces a challenge in the area of mental health.

The accessibility of mental health services in India, especially in terms of reachability, is an area needing significant improvement. Despite India being one of the first countries to adopt a standard health system for mental healthcare, individuals have to travel for about 10 km to avail services from the District Mental Health Program (NMHS, 2016). This programme was established to decentralize mental health services by offering them at a community level. By integrating both mental health and the general healthcare delivery system (Singh, 2018), it aimed to improve accessibility and promote self-help in the community. While it has been successful in offering mental healthcare at a district level, providing the same beyond the district level has been a challenge (Singh, 2018).

Further, there also exists a shortage of mental health professionals, with the professionals-to-population ratio being low. The number of mental healthcare workers ranges from 0.05 in Madhya Pradesh to 1.2 in Kerala for a population of hundred thousand (Gururaj et al., 2016, as cited in Singh, 2018). There are only 0.75 psychiatrists available for 100,000 people in India (Sandhu, 2020), and the number of registered practicing clinical psychologists in India is staggeringly low (Chakrapani and Bharat, 2023). Around 10% of the population in India requires mental health treatment; however, many of those who need mental health support in India remain untreated. The recent reports indicate a treatment gap of 83% for any mental health disorder prior to the COVID-19 pandemic. The number of people and areas to be covered demands an alternate approach that complements the existing system to effectively treat individuals in need of therapy and counselling (Singh & Sagar, 2022).

India consists of 1.4 billion people, making it the highest populated country. Mental health problems are said to be one of the most common problems faced by young adults (Jurewicz, 2015), and around 65% of the population falls below 35 years of age in India (Deo, 2023). Depression and anxiety are the most common mental health issues faced by the population (WHO, 2022), and a recent report states that more than 50% of the youth in India have poor mental health (Pradeep, 2023). Out of a large number of populations requiring help, only 7.8% of youth report mental illness (Gaiha et al., 2020).

India is a vast country, with around 65% of the population residing in rural regions (PIB, 2023). This makes accessibility and reachability a challenge for implementation from the systems perspective and the availability of mental health services to the public. Further opportunities, lifestyle, social structures, health belief systems and help-seeking behaviour differ between urban and rural areas, indicating a divide (Gupta, 2024). Reduced education, awareness and infrastructure in rural areas are a few areas that make it challenging to provide mental health services (Iyer et al., 2023). Stigma towards mental health issues in rural areas is more visible in comparison to urban areas (Gupta, 2024), and the reasons for stigma range from diverse cultural beliefs, socioeconomic status, access to healthcare and awareness (CHP 2 Depression Group et al., 2019; Trani et al., 2014; Zeiger et al., 2016). Mental health literacy can significantly improve awareness and aid in facilitating an improved attitude towards therapy. Recognition of symptoms helps the individual and the ones around them to approach help. A study carried out in South India found that less than one-third of the participants in their adolescent ages could recognize depression, while only 1.31% could recognize schizophrenia, while around 30.68% of the participants would not prefer to seek help for mental health issues (Ogorchukwu et al., 2016) suggesting that awareness acts as a significant barrier.

Arahanthabailu (2024) highlights that affordability, geographical disparity, accessibility and lack of insurance coverage act as a barrier to seeking help. Larger families consist of individuals belonging to different generations, and mental illnesses such as depression are more likely to be stigmatized among the older generation (Baral et al., 2022). Further, a large number of working populations in metropolitan cities prefer to stay in paying guest (PG's) rooms. People who stay in these PGs often share rooms, making privacy or self-isolation a problematic task (The Hindu, 2020). Discreet counselling helps maintain anonymity while seeking help, especially when privacy is challenged in shared spaces. Stressors at the workplace seem to be a relevant contributing factor to well-being and mental health issues among the working population, and mental health problems increase dropout and sick leaves (Rajgopal, 2010). Moreover, mental health problems among employees cause ill health and increased sick leaves (NICE, 2009, as cited in Hitt et al., 2018).

Limited resources, financial and time constraints and fear of disclosure due to the present stigma (Clement et al., 2015; Salaheddin and Mason, 2016) act as barriers. The Indian culture encourages children or youth to stay with their parents until they get married (Bhowmick, 2010), which means that most of the youth in India share spaces with one or more family members. Negative attitudes of parents towards mental health affect the children (Ferrie et al., 2020, as cited in Ramiro et al., 2024). The prevalence of mental health issues among college students may be attributed to issues such as failing to recognize or accept (denial) mental health symptoms and/or receiving insufficient care.

Online or web-based counselling has been gaining popularity all over the world for its ease of use, access and reachability. Counselling through an online mode has several advantages that are exclusive of what is found in offline counselling. It prioritizes the comfort of the clients and provides autonomy experienced from remaining anonymous over the Internet (Chan, 2020). Further costs relating to transportation, such as parking hassles, can be avoided while going through using technology for treatment (Doss et al., 2017). When it comes to working professionals or corporate employees who work for a fixed number of hours a day, catering to their well-being during their day-to-day life during work hours would not be possible. In such cases, online counselling is convenient, and the same applies to college students, where the majority of Indian college students are occupied at the institute for the whole day throughout the week. The young population of India has been active with the usage of the internet and smartphones, and around 759 million Indians access the internet at least once a month, out of which 399 million reside in rural areas (Majumdar, 2023). The increased internet usage across the country has developed the potential to reach individuals in need of mental healthcare. Miller and Sonderland's (2010) research states that web-based interventions are easily accessible and provide a favourable cost–benefit outcome to individuals (Curry, 2007).

Online synchronous chat session is defined as real-time, text-based, one-to-one chat with a mental health professional and/or a trained volunteer (Tibbs et al., 2022). Synchronous sessions bridge the gap by meeting clients halfway and providing therapy with ease of use on a modern platform. Young individuals are often hesitant to seek help due to availability or access to services appropriate to the areas or issues faced (Eckert et al., 2022), along with the barriers present in an Indian context. Leveraging the access of technology to utilize these services would make a positive difference. Research states that there is no significant difference found between online chat and face-to-face counselling and that young people gain from a single session of chat counselling (Dowling and Rickwood, 2013). Text-based mental health services have been proven to be effective in treating mental health conditions, and a single session is said to reduce anxiety to a similar degree as traditional face-to-face counselling (Dwyer et al., 2021). The anonymity of the clients is highly prioritized. In an age where technology is advancing rapidly and numerous digital therapy platforms have emerged, sessions with experts in a synchronous domain, following a mixture of technology and traditional therapy, help individuals seeking help (Balasinorwala et al., 2014).

Cognitive behavioural therapy (CBT) is known to help with negative self-talk and helps in developing problem-solving and coping skills, thereby improving their overall academic performance (Kumar and Sebastian, 2011). CBT treatment among the working population has helped in achieving significant positive results on

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their mental health (Ojala et al., 2018). An internet-based CBT self-guided program in the US showed lower work absence compared to in-person or telephone counselling; however, productivity levels were similar in nature (Attridge, 2020). Most of the studies on online counselling highlight the role of CBT in counselling, while very few interventions utilize therapies, such as motivation theory or problem-solving therapy. CBT has been used to help individuals deal and cope with problems ranging from self-improvement to problems that are psychiatric in nature. Studies state that there has been sufficient evidence to prove that the CBT approach is as powerful or more effective compared to other forms of psychological therapy and psychiatric medicines, and its usefulness extends to psychological and physical conditions and behavioural problems among individuals (APA, 2017; Nakao et al., 2021). In this form of therapy, the therapist enables the client to identify, evaluate and change one's perception and cognition, which helps improve the mood and the behaviour (Gaudino, 2008). Internet-based CBT research highlights that the concerns faced by individuals are mostly psychological (Eckert et al., 2022) in nature, and most of the research in this domain focuses on psychological and psychiatric disorders (Johansson and Andersoson, 2012; Kiropoulos et al., 2008; Klein et al., 2009; Kumar et al., 2017; Webb et al., 2017; Zerwas et al., 2016).

In an Indian context, studies have not been carried out to determine the impact of chat-based online therapy. Further, a comparative study has not been conducted based on the intervention's outcome among college students and corporate employees. Western research highlights that individuals who reach out for therapy primarily seek services for psychiatric symptoms and that there exist no conclusive results between gender and the well-being of the individuals (Hasan, 2019; Matud et al., 2021). A study comparing the outcomes of online synchronous chat-based counselling and telephonic counselling among young individuals found the former to be more effective (Fukknik and Hermanns, 2009, as cited in Tibbs et al., 2022). The present study uncovers the impact of chat-based therapy by analysing the clients' well-being before and after the sessions synchronously. The program was carried out with the aim to improve access to therapy. The data collected from the intervention program was used to carry out a retrospective analysis. The intervention involves CBT as a mode of treatment. CBT has been the primary mode of therapy followed as clients well receive it and can be modified along with other therapies based on the session's needs. Our study takes diverse genders into consideration, along with males and females, to determine the variation in the impact of the treatment.

Further, most research papers focus on video conferencing or blended treatment. Our study focuses on the intervention's satisfaction and effect on well-being after a complete synchronous chat-based session. This helps to understand whether the current intervention program is feasible for individuals across seven problem categories. Most of the studies focus on psychological disorders or issues that are psychiatric in nature; our study takes self-improvement and specific issues, such as relationships, into consideration. The approach used is tailored according to the goals of the individual which is bounded by CBT.

The study aims to determine whether the type of organization, duration and gender have an association with subjective unit of well-being (SUW) and satisfaction scores, along with determining the impact on change in well-being post-intervention. College students and corporate employees were targeted as a part of the intervention programme as joint efforts with institutions would help reach a large number of individuals who want to seek therapy.

Hypotheses

H1: The SUW scores will be higher among the total sample post intervention.
H2: Gender of the participants will influence the SUW and satisfaction levels among the population.
H3: The impact on SUW and satisfaction levels has a relation with duration of session.

Materials and method

Intervention

The intervention involved sessions on a single session basis which were synchronous in nature with an average duration of 41.60 min. The sessions mainly followed CBT along with other therapies depending on individual cases. Problem areas, such as Relationships, Career/Academics, Abuse and Discrimination, Self-improvement, Psychological Disorders, LGBTQAI+ and Sexual Well-being, were reported to the counsellors by the participants prior to the sessions. The option to chat instantly with an available therapist or schedule an appointment based on problem area and availability was provided to the individuals. The therapists and counsellors, termed as experts, had a minimum qualification of master's degree in Psychology or Counselling. These counsellors were assigned based on availability and problem areas of the clients. As a part of their induction program, the counsellors were trained to provide counselling through chat-based mode. Further, to make sure that the counsellors stay up to date on the treatment procedures and counselling techniques, periodic training was offered across all problem areas. Every new counsellor was supervised by an individual mentor on a weekly basis. The assigned mentor was tasked with going through the chats and providing feedback. The satisfaction levels of the clients post session were also taken into consideration. Upon completing 3 months with the platform, supervision was carried out fortnightly. Training was provided to all psychologists every week in a group setting and these trained group of counsellors provided therapy for 1 year.

Two therapy options were made available to the participants – chatting instantly and scheduling an appointment mainly followed the CBT framework. Prior to the session the SUW, and satisfaction levels were self-reported by the clients through a Likert scale, and data, such as age, organization type (college or workplace) and gender, were recorded from registration portal.

Design

The study used a retrospective cohort evaluation of chat-based counselling intervention where pre and post results were analysed. The data were collected routinely for a period of 1 year, from 10 October 2022 to 10 October 2023.

Data collection

Organizations carried out programmes for mental health and well-being, including orientations and several other programmes. YourDost reference was provided to college students and employees. The posters printed out by organizations were put up in cafeterias and halls to enhance reachability. The therapy sessions were conducted over YourDost platform where the individuals wanting to avail counselling register under an anonymous name. Consent was obtained during the registration of the clients on the platform.

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Measures

One item, 11-point Likert scale ranging from 0 to 10, was used to record the SUW prior to the intervention and post intervention to ascertain the well-being levels. A single question pre and post session – "Rate your Wellness levels on a scale of 0 to 10" was asked to the participants.

Problem area was collected through a drop-down list prior to booking the session. Ratings or satisfaction with the session was collected post session on a 5-point Likert scale. The question consisted of a single item "On a Scale of 1 to 5 rate how well you are satisfied with the session."

Data analysis and criteria

Data was analysed with the usage of Jamovi and Microsoft excel. The inclusion criteria for the study involved population from two organization types: college students who were above 17 years of age and working individuals who were above 18 years of age. The exclusion criteria involved individuals who did not rate their SUW before and after sessions, satisfaction levels and who did not report a problem area. Tests were carried out to determine the relation as well as associations. Since the data were not normally distributed, non-parametric equivalents were used.

Results

The study was conducted for a period of 1 year between 10 October 2022 and 10 October 2023. The sample is a subset of 50,127 college students and corporate employees who had completed data on all parameters measured; 3429 clients were selected after excluding the clients who had provided incomplete data. Out of 50,127 individuals, 4752 provided the SUW scores; 781 individuals did not mention the problem area, 547 individuals did not mention the age and gender wasn't mentioned for 21 individuals. Some of the missing parameters overlapped and individuals did not answer more than one area. Eight individuals were excluded for providing inconsistent data based on age and organization type.

From the sample, *2624 (77%)* of the clients were college students and *805 (23%)* of the clients were corporate employees as displayed in Table 1. The mean (SD) age of all the clients, including the college and corporate employees, was $M = 23.76$ $(SD = 4.35)$. The clients reported problems, which were broadly categorised into seven areas, mentioned in Table 5. The majority of the clients received counselling for relationships *(35%, N = 1,208)* and Self-improvement *(35%, N = 1,217)*. The demographic characteristics of the clients are provided in the tables.

H1: The SUW scores will be higher among the total sample post intervention

The mean and median of SUW displayed in Table 2 and 4 is 4.63 and 5 before the intervention while post intervention mean and median is *7.32* and *8*. Wilcoxon signed rank test indicates significant results with the $W = 166{,}775$ $(p < 0.001)$ and an effect size of -0.926, suggesting significant difference in SUW scores post intervention. The organization type did not exhibit association with the base scores however, significant association $(p < 0.05, \eta^2 = 0.00125, \chi^2 = 4.287)$ was observed with the SUW end scores through a Kruskal–Wallis test. The end mean SUW was higher for corporate employees $M = 7.48(2.19)$ compared to college students $M = 7.27$ (2.28) *as seen in table 2.* The SUW post intervention was higher across all problem areas.

H2: Gender of the participants will influence the SUW and satisfaction levels among the population

The satisfaction levels had a significant association with gender of the population $(p < 0.001, \eta^2 = 0.00505, \chi^2 = 17.32)$ *(supplementary material: Gender and associations)*. The Kruskal–Wallis test revealed that gender was associated with both baseline SUW $(p < 0.001, \eta^2 = 0.00931, \chi^2 = 31.92)$ and endline SUW scores $(p < 0.05, 0.00273, \chi^2 = 9.36)$ *(supplementary material: Gender and associations)*. The mean SUW post-intervention displayed higher mean for male group $M = 7.41(2.31)$, lower for female group $M = 7.26(2.19)$ and the least for diverse gender group *7.19(2.33)*. The satisfaction levels remained similar for male and female population $M = 4.42(0.90)$ and *4.42(0.88)* while diverse population had lower mean satisfaction *4.23(0.96)*.

H3: The impact on SUW and satisfaction levels have a relation with duration of session

The mean satisfaction level is 4.41 while the end line mean SUW is 7.32, as displayed in Table 3. The ratings (satisfaction levels) provided by the participants displayed positive correlation between impact $(p < 0.001, r = 0.257)$ and duration of the sessions $(p < 0.001, r = 0.121)$ *as shown in Table 6*. These satisfaction levels were

Table 1. Sociodemographic characteristics based on organization type and other variables

	Total	College	Corporate	*p*-Value
Number of participants	3429	2,624 (77%)	805 (23%)	
Mean age in years (SD)	23.8 (4.35)	23.69 (4.29)	23.97 (4.54)	0.05
Gender				0.001
Male	1592 (46%)	1,259 (48%)	333 (41%)	
Female	1549 (45%)	1,172 (45%)	377 (47%)	
Other	288 (8%)	193 (7%)	95 (12%)	
SUW				
Mean base SUW	4.63 (2.36)	4.59 (2.34)	4.74 (2.43)	0.05
Mean end SUW	7.32 (2.26)	7.27 (2.28)	7.48 (2.19)	0.05
Mean satisfaction	4.41 (0.90)	4.40 (0.92)	4.42 (0.85)	0.05

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Table 2. Sociodemographic characteristics based on gender and other variables

	Total	Male	Female	Other	*p*-Value
Mean age in years	23.8 (4.35)	23.7 (4.31)	23.9 (4.43)	23.5 (4.21)	0.05
Mean base SUW	4.63 (2.36)	4.87 (2.45)	4.42 (2.24)	4.38 (2.38)	0.001
Mean end SUW	7.32 (2.26)	7.41 (2.31)	7.26 (2.19)	7.19 (2.33)	0.05
Duration	41.6 (14.2)	41.00 (14.2)	42.8 (13.8)	39.30 (15.40)	0.001
Mean satisfaction	4.41 (0.90)	4.42 (0.90)	4.42 (0.88)	4.23 (0.96)	0.001

Table 3. Sociodemographic characteristics based on duration and other variables

	Total	*p*-Value
Mean satisfaction	4.41 (0.90)	0.001
Mean SUW end	7.32 (2.26)	0.05
Gender	Male, female, other	0.001

Table 4. Table displaying SUW

SUW before median	5
SUW after median	8
Wilcoxon signed rank	$W = 166{,}775$ ($p < 0.001$)
Z score	−44.100a
SUW before	
Q1	3
Q3	6
SUW after	
Q1	6
Q3	9

determined on the basis of clients' ratings provided to the sessions. Impact scores displayed in Table 4 were calculated as the difference between base SUW and end SUW. The duration and impact had a positive correlation of *($p < 0.001$, $r = 0.108$)*.

Other results

The mean (SD) of base SUW for males was *$M = 4.87$ ($SD = 2.45$)*, females was *$M = 4.42$ ($SD = 2.24$)* and *$M = 4.38$ ($SD = 2.38$)* for diverse population. The chi-squared test between organization (college and corporate) and gender suggests that there is strong association *($p < 0.001$, $\chi^2 = 20.9$)* (*supplementary material: Chi-Square Test*) between the two variables however the population identifying as "other" under the gender category is observed to be higher (3.33) under corporate, while the observed value for college category (−1.84) seems to be less than expected. Despite the strong association between gender and organization, the Cramer's *V* test suggests a weak association between these two variables (0.0782). Further, the observed male population for corporate seem to be significantly lower than expected (−2.11).

Discussion

The higher SUW scores post intervention demonstrates that the chat-based intervention had a positive effect on well-being of the participants. The gender of the participants influences SUW and satisfaction levels. It was found that the mean satisfaction levels between males and females remained similar between these two groups, while the diverse population displayed lower satisfaction levels. The mean SUW was recorded to be lower for women and diverse populations overall. This goes in line with the study carried out stating that women tend to display reduced subjective well-being when compared to men (Tesch-Römer et al., 2008), and the diverse population experiences reduced subjective well-being due to discrimination (Conlin et al., 2019).

The impact levels (difference between the SUW pre and post) showed significant associations with gender. The male population displayed lower impact compared to the diverse population. The male population in comparison to the female population displayed a significant association. The female population had higher impact levels compared to males, and the comparison between females and diverse populations displayed no significant difference. As the results are promising in terms of impact on SUW, the counselling

Table 5. Sociodemographic characteristics based on problem category and other variables

	N	Duration	Satisfaction	Mean base SUW	Mean end SUW
Total	3429	41.6 (14.2)	4.41 (0.90)	4.63 (2.36)	7.32 (2.26)
Relationships	1208	41.90 (14.0)	4.43 (0.89)	4.69 (2.33)	7.46 (2.19)
Career/academics	442	40.9 (14.20)	4.35 (0.93)	4.62 (2.31)	7.24 (2.30)
Abuse and discrimination	42	38.0 (14.10)	4.21 (1.00)	4.38 (2.16)	6.83 (2.57)
Self-improvement	1217	41.6 (14.30)	4.40 (0.89)	4.58 (2.41)	7.25 (2.30)
Psychological disorders	305	42.3 (13.90)	4.47 (0.86)	4.61 (2.38)	7.32 (2.26)
LGBTQAI+	26	37.3 (15.30)	4.31 (0.88)	5.69 (2.26)	7.42 (1.98)
Sexual wellness	189	42.2(14.70)	4.40(0.99)	4.48 (2.40)	7.16 (2.33)
p Value	0.05	0.05	0.05	0.05	0.05

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Table 6. Table displaying correlation between Impact and other variables

Correlation matrix							
		Impact	age	Base SUW	Duration	Satisfaction	End SUW
Impact	Spearman's ρ	—					
	p-Value	—					
Age	Spearman's ρ	0.007		—			
	p-Value	0.688		—			
Base SUW	Spearman's ρ	−0.536***	−0.008	—			
	p-Value	< 0.001	0.652	—			
Duration	Spearman's ρ	0.108***	0.003	−0.000	—		
	p-Value	<0 .001	0.871	0.980	—		
Satisfaction	Spearman's ρ	0.257***	0.008	0.126***	0.121***	—	
	p-Value	<0 .001	0.624	<0 .001	<0 .001	—	
End SUW	Spearman's ρ	0.483***	0.000	0.370***	0.044*	0.419***	—
	p-Value	<0 .001	0.983	< 0.001	0.010	< 0.001	—

Note: *p < 0.05, **p < 0.01, ***p < 0.001.

sessions provided seems impactful and can be helpful if carried out on broader areas. Regardless of the type of problem faced, the well-being was noted to be higher post intervention suggesting that online chat mode of counselling using CBT can be made applicable throughout all problem areas. Past research has proven CBT to be effective in case of chat-based and video-based counselling. This result also goes in line with the study carried out by Bani et al. (2020) and Cooper (2009) which speaks about the improvement in wellness among students post counselling. The students experience significant reduction in distress among the individuals who completed the interventions (Bani et al., 2022). In this study, we see that duration and impact levels had a positive relation suggesting that higher the duration higher the impact on subjective well-being experienced by the population. The study conducted by Dowling and Rickwood (2014) suggests that chat-based counselling was more impactful among individuals who took a higher number of sessions, and Freedman et al. (1999) states that duration has a significant relationship with the patient's satisfaction levels. Our study goes in line with the narrative that longer the time spent with the therapist higher the level of impact in well-being of the clients.

It is possible that younger individuals are more predisposed towards availing online resources to support emotional and mental well-being, which is in line with the research carried out by Pretorius et al. (2019) stating that accessibility of internet is helpful and made use of by young individuals (Power et al., 2020; Pretorius et al. (2019). Further, mental health is categorized as one of the common problems faced by young adults (Jurewicz, 2015).

Research shows that help-seeking behaviour is less common among adults within the age group of 18–24. However, this age group happens to be active with internet usage (Mitchell et al., 2017). Stigma and anonymity may be an issue while seeking help therefore online tools such as chat may influence help-seeking behaviour. In the current study, the sessions were offered free. However, it is observed that chat sessions are provided at a reduced rate in comparison to video calls, therefore increasing the cost-effectiveness while seeking treatment. Further, the anonymity present through chat-based therapy sounds encouraging to individuals who worry about the stigma associated with seeking mental healthcare.

The experts carrying out the intervention were trained psychologists and counsellors who could either be selected by the individual or be assigned based on availability and problem areas faced. The mean satisfaction level suggests that the individuals were content with the sessions. It was also noticed that base SUW levels had significant negative correlation with the impact levels suggesting a possibility that individuals who had a higher well-being score prior to the intervention might have found the session to be ineffective. Majority of the clients availed counselling for relationship issues and self-improvement regardless of college and corporate employees, suggesting that organization type may not play a prominent role in narrowing down the type of problems faced. Further, the gender of the clients had an association with the impact levels, and it was found that comparisons between males and females were significant.

This mode of therapy helps the clients come up with goals and work through faulty perceptions, which ultimately uplifts their mood and adds to their well-being. Improving well-being for both college students and corporate employees is highly helpful, given that both fields involve specific goals that have to be achieved in the institute or organizations. Improving well-being increases the ability of the individuals to better deal with emotions and reduces the susceptibility towards mental health disorders (Cloninger, 2007). Further, the educational experience of the psychologists and the training they receive help to facilitate smoother and more effective sessions among clients from various backgrounds. The flexibility and the accessibility of the platform enhance help-seeking behaviour, thus improving the mental health of individuals in need. The client has the autonomy and flexibility to proceed with the therapist of their choice, and if not, the assigning of the therapist takes place after the client approves it. This helps in making sure that the client is comfortable throughout the therapy process.

Since the study used limited items and non-standardized scales to determine the well-being pre and post intervention, one may not be able to generalize the results. Given that individuals voluntarily sought counselling, the study was primarily focused on a natural and realistic setting. Furthermore, because the purpose was to help the participants, having shorter questions to provide an

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understanding of weather they were helped while preventing response burden was the intention. The team of experts being diverse and qualified in the problem categories mentioned adds to the comfort and satisfaction of the individuals seeking help. In cases where the individual was found to engage in self-harm or carrying out extreme steps, references of psychiatrists were provided.

The study predominantly highlights that the online chat-based intervention has been successful in improving the well-being post session regardless of the problem area faced by the individuals. Improving accessibility while ascertaining confidentiality helps in promoting mental healthcare while tackling stigma toward mental health. In an Indian context, mental health must be given the priority that it requires. Therefore, making use of technology along with models of therapy can help in bringing out necessary changes to better understand and address mental health issues in the country.

Future directions and limitations

In the future, it would be helpful to make use of standardised tools to facilitate broader usage of chat-based counselling. As the study did not have a comparison group, its impact levels may be questioned. The nature of the study and its retrospective methodology limit improvisation of the study in its present form. Future studies may take control groups into account in order to measure effectiveness of the interventions. Further, following up to determine the SUW after a few weeks would help in strengthening the study. The use of CBT from an online counselling lens has been gaining momentum; however, it is understood the college students and corporate employees have access to gadgets and devices. If the study is expanded to cover a bigger population, it would be helpful to understand its accessibility among populations who are not very well versed with technology. Carrying out comparative studies between different modes of counselling including chat-based counselling in India will help towards contributing to the field.

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References

American Psychological Association (2017) What is Cognitive Behavioral Therapy. *PTSD Guideline.* Available at https://www.apa.org/ptsd-guideline/patients-and-families/cognitive-behavioral

Arahanthabailu P, **Praharaj SK**, **Purohith AN**, **Yesodharan R**, **Rege S and Appaji R** (2024) Exploring barriers to seek mental health services among patients with severe mental illness and their caregivers in a modified assertive community treatment program: A qualitative thematic analysis. *Indian Journal of Psychiatry* **66**(7), 621–629. https://doi.org/10.4103/indianjpsychiatry.indianjpsychiatry_314_24.

Attridge M (2020) Internet-based cognitive-behavioral therapy for employees with anxiety, depression, social phobia, or insomnia: Clinical and work outcomes. *SAGE Open*, **10**(1),1–17. https://doi.org/10.1177/2158244020914398.

Balasinorwala VP, **Shah NB**, **Chatterjee SD**, **Kale VP and Matcheswalla YA** (2014) Asynchronous telepsychiatry in Maharashtra, India: Study of feasibility and referral pattern. *Indian Journal of Psychological Medicine* **36**, 299–301.

Bani M, **Zorzi F**, **Corrias D and Strepparava M** (2022) Reducing psychological distress and improving student wellbeing and academic self-efficacy: The effectiveness of a cognitive university counselling service for clinical and non-clinical situations. *British Journal of Guidance & Counselling* **50**(5), 757–767. https://doi.org/10.1080/03069885.2020.1840512.

Baral SP, **Prasad P and Raghuvamshi G** (2022) Mental health awareness and generation gap. *Indian Journal of Psychiatry* **64**(Suppl 3), S636. https://doi.org/10.4103/0019-5545.341859.

Bhowmick BN (2010, January 27) Indian Kids Prefer Staying With Parents. *Times of India.* Available at http://timesofindia.indiatimes.com/articleshow/5410142.cms#google_vignette?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

Chakrapani V and Bharat S (2023) Mental health in India: Sociocultural dimensions, policies and programs – An introduction to the India series. *SSM. Mental Health* **4**, 100277. https://doi.org/10.1016/j.ssmmh.2023.100277.

Chan GH (2020) A comparative analysis of online, offline, and integrated counselling among hidden youth in Hong Kong. *Children and Youth Services Review* **114**(1). https://doi.org/10.1016/j.childyouth.2020.105042.

CHP 2 Depression Group, **Guttikonda A**, **Shajan AM**, **Hephzibah A**, **Jones AS**, **Susanna J**, **Neethu S**, **Poornima S**, **Jala SM**, **Arputharaj D**, **John D**, **Natta N**, **Fernandes D**, **Jeyapaul S**, **Jamkhandi D**, **Prashanth HR and Oommen AM** (2019) Perceived stigma regarding mental illnesses among rural adults in Vellore, Tamil Nadu, South India. *Indian Journal of Psychological Medicine* **41**(2), 173–177. https://doi.org/10.4103/IJPSYM.IJPSYM_297_18.

Clement S, **Schauman O**, **Graham T**, **Maggioni F**, **Evans-Lacko S**, **Bezborodovs N**, **Morgan C**, **Rüsch N**, **Brown JS and Thornicroft G** (2015) What is the impact of mental health-related stigma on help-seeking? A systematic review of quantitative and qualitative studies. *Psychological Medicine* **45**(1), 11–27. https://doi.org/10.1017/S0033291714000129.

Cloninger R (2007) The science of well-being: An integrated approach to mental health and its disorders. *Psychiatria Danubina* **18**(3–4), 218–224.

Conlin SE, **Douglass RP and Ouch S** (2019) Discrimination, subjective well-being, and the role of gender: A mediation model of LGB minority stress. *Journal of Homosexuality* **66**(2), 238–259. https://doi.org/10.1080/00918369.2017.1398023.

Cooper M (2009) Counselling in UK secondary schools: A comprehensive review of audit and evaluation data. *Counselling in Schools* **9**(3), 137–150. https://doi.org/10.1080/14733140903079258.

Curry SJ (2007) eHealth research and healthcare delivery. Beyond intervention effectiveness. *American Journal of Preventive Medicine* **32**(5), S127–30. https://doi.org/10.1016/j.childyouth.2020.105042.

Deo P (2023, February 2) Is India's Rapidly Growing Youth Population a Dividend or a Disaster. *The Times of India.* Available at https://timesofindia.indiatimes.com/india/is-indias-rapidly-growing-youth-population-a-dividend-or-disaster/articleshow/97545222.cms

Doss BD, **Feinberg LK**, **Rothman K**, **Roddy MK and Comer JS** (2017) Using technology to enhance and expand interventions for couples and families:

Conceptual and methodological considerations. *Journal of Family Psychology* **31**(8), 983–993. https://doi.org/10.1037/fam0000349.

Dowling M and Rickwood D (2013) Online counselling and therapy for mental health problems: A systematic review of individual synchronous interventions using chat. In *Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews*. Available at https://www.ncbi.nlm.nih.gov/books/NBK138124/

Dowling M and Rickwood D (2014) Investigating individual online synchronous chat counselling processes and treatment outcomes for young people. *Advances in Mental Health* **12**(3), 216–224. https://doi.org/10.1080/18374905.2014.11081899.

Dwyer A, **de Almeida Neto A**, **Estival D**, **Li W**, **Lam-Cassettari C and Antoniou M** (2021) Suitability of text-based communications for the delivery of psychological therapeutic services to rural and remote communities: Scoping Review *JMIR Mental Health* **8**(2), e19478. https://doi.org/10.2196/19478.

Eckert M, **Efe Z**, **Guenthner L**, **Baldofski S**, **Kuehne K**, **Wundrack R**, **Thomas J**, **Saee S**, **Kohls E and Rummel-Kluge C** (2022) Acceptability and feasibility of a messenger-based psychological chat counselling service for children and young adults ("krisenchat"): A cross-sectional study. *Internet Interventions* **27**, 100508. https://doi.org/10.1016/j.invent.2022.100508.

Ferrie J, **Miller H and Hunter SC** (2020) Psychosocial outcomes of mental illness stigma in children and adolescents: A mixed-methods systematic review. *Children and Youth Service Review* **113**(1).

Freedman N, **Hoffenberg JD**, **Vorus N and Frosch A** (1999) The effectiveness of psychoanalytic psychotherapy: The role of treatment duration, frequency of sessions, and the therapeutic relationship. *Journal of the American Psychoanalytic Association* **47**(3), 741–772. https://doi.org/10.1177/000306519904700310 01.

Fukkink R and Hermanns J (2009) Counselling children at a helpline: Chatting or calling? *Journal of Community Psychology* **37**(8), 939–948. https://doi.org/10.1002/jcop.20340.

Gaiha SM, **Taylor Salisbury T**, **Koschorke M**, **Raman U and Petticrew M** (2020) Stigma associated with mental health problems among young people in India: A systematic review of magnitude, manifestations and recommendations. *BMC Psychiatry* **20**(538), 2–24. https://doi.org/10.1186/s12888-020-02937-x.

Gaudiano BA (2008) Cognitive-behavioural therapies: Achievements and challenges. *Evidence-Based Mental Health* **11**(1), 5–7. https://doi.org/10.1136/ebmh.11.1.5.

Gururaj G, **Varghese M**, **Benegal V**, **Rao GN**, **Pathak K**, **Singh LK**, et al.; **Bengaluru: National Institute of Mental Health and Neuro Sciences** (2016) National Mental Health Survey of India, 2015–16: Prevalence, Patterns and Outcomes NIMHANS Publication No. 128, pp. 30–32.

Gupta, R. (2024) Rural-urban divide in mental health care in India: Bridging the gaps. *Indian Journal of Social Psychiatry*. DOI: 10.4103/ijsp.ijsp_41_24

Hasan M (2019) Psychological Well-Being and Gender Difference Among Science and Social Science Students. Available at https://www.researchgate.net/publication/334459204_Psychological_Well-being_and_Gender_Difference_among_Science_and_Social_Science_students

Hitt D, **Tahir T**, **Davies L**, **Delahay J and Kelson M** (2018) The clinical effectiveness of a cognitive behavioural therapy intervention in a work setting: A 5-year retrospective analysis of outcomes. *Journal of research in nursing: JRN* **23**(4), 360–372. https://doi.org/10.1177/1744987117745580.

Iyer K, **Gupta P**, **Sapre S**, **Pawar T**, **Gala P**, **Kapoor H**, **Kalahasthi R**, **Ticku A**, **Kulkarni S and Iyer P** (2023) Mental health resources, barriers, and intervention needs among women in rural Maharashtra, India: A qualitative study. *Global Mental Health (Cambridge, England)* **10**, e93. https://doi.org/10.1017/gmh.2023.78.

Johansson R and Andersson G (2012) Internet-based psychological treatments for depression, *Expert Review of Neurotherapeutics* **12**(7), 861–870. https://doi.org/10.1586/ern.12.63.

Jurewicz I (2015) Mental health in young adults and adolescents – Supporting general physicians to provide holistic care. *Clinical Medicine (London, England)* **15**(2), 151–154. https://doi.org/10.7861/clinmedicine.15-2-151.

Kiropoulos LA, **Klein B**, **Austin DW**, **Gilson K**, **Pier C**, **Mitchell J and Ciechomski L** (2008) Is internet-based CBT for panic disorder and agoraphobia as effective as face-to-face CBT?, *Journal of Anxiety Disorders*. **22**(8), 1273–1284. https://doi.org/10.1016/j.janxdis.2008.01.008.

Klein B, **Mitchell J**, **Gilson K**, **Shandley K**, **Austin D**, **Kiropoulos L**, **Abbott J and Cannard G** (2009) A therapist-assisted internet-based CBT intervention for posttraumatic stress disorder: Preliminary results, *Cognitive Behaviour Therapy* **38**(2), 121–131. https://doi.org/10.1080/16506070902803483.

Kumar V, **Sattar Y**, **Bseiso A**, **Khan S and Rutkofsky IH** (2017) The effectiveness of internet-based cognitive behavioral therapy in treatment of psychiatric disorders. *Cureus* **9**(8), e1626. https://doi.org/10.7759/cureus.1626.

Kumar V and Sebastian L (2011) Impact of CBT on self-efficacy and academic achievement in adolescent students. **37**, 134–139 *Journal of the Indian Academy of Applied Psychology*.

Majumdar R (2023, May 3) 52% of Indian Population had Internet Access in 2022, Says Report. *Economic Times, Tech and Internet*. Available at https://economictimes.indiatimes.com/tech/technology/52-of-indian-population-had-internet-access-in-2022-says-report/articleshow/99964704.cms

Matud MP, **Bethencourt JM**, **Ibáñez I**, **Fortes D and Díaz A** (2021) Gender differences in psychological well-being in emerging adulthood. *Applied Research in Quality of Life*. Advance online publication. https://doi.org/10.1007/s11482-021-09943-5.

Miller PG and Sønderlund AL (2010) Using the internet to research hidden populations of illicit drug users: A review. *Addiction* **105**(9), 1557–1567.

Mitchell C, **McMillan B and Hagan T** (2017) Mental health help-seeking behaviours in young adults. *The British Journal of General Practice* **67**(654), 8–9. https://doi.org/10.3399/bjgp17X688453.

Nakao M, **Shirotsuki K and Sugaya N** (2021) Cognitive–behavioral therapy for management of mental health and stress-related disorders: Recent advances in techniques and technologies. *BioPsychoSocial Medicine* **15**(16), 1–4. https://doi.org/10.1186/s13030-021-00219-w.

National Institute for Health and Clinical Excellence (NICE) (2009) *Managing Long-Term Sickness Absence and Incapacity for Work (CG19)*, London: National Institute for Health and Care Excellence.

National Mental Health Survey of India (2016) Mental health systems. *Ministry of Health and Family Welfare*. Available at https://main.mohfw.gov.in/sites/default/files/National%20Mental%20Health%20Survey,%202015-16%20-%20Mental%20Health%20Systems_0.pdf

Ogorchukwu JM, **Sekaran VC**, **Nair S and Ashok L** (2016) Mental health literacy among late adolescents in South India: What they know and what attitudes drive them. *Indian Journal of Psychological Medicine* **38**(3), 234–241. https://doi.org/10.4103/0253-7176.

Ojala B, **Nygård CH**, **Huhtala H**, **Bohle P and Nikkari ST** (2018) A cognitive behavioural intervention programme to improve psychological well-being. *International Journal of Environmental Research and Public Health* **16**(1), 80. https://doi.org/10.3390/ijerph16010080.

Ollerton I (1995) Class barriers to psychotherapy and counselling. *Journal of Psychiatric and Mental Health Nursing* **2**(2), 91–95. https://doi.org/10.1111/j.1365-2850.1995.tb00148.x.

Power E, **Hughes S**, **Cotter D, and Cannon M** (2020) Youth mental health in the time of COVID-19. *Irish Journal of Psychological Medicine* **37**, 301–305. https://doi.org/10.1017/ipm.2020.84

Pradeep NS (2023, December 2) A Majority of Indian Youth Have Poor Mental Health and It Is Affecting Their Productivity. Available at https://www.thehindubusinessline.com/data-stories/data-focus/a-majority-of-indian-youth-have-poor-mental-health-and-it-is-affecting-their-productivity/article67594114.ece

Pretorius C, **Chambers D**, **Cowan B and Coyle D** (2019) Young people seeking help online for mental health: Cross-sectional survey study. *JMIR Mental Health* **6**, e13524. https://doi.org/10.2196/13524.

Pretorius, C. and Coyle D (2021) Young people's use of digital tools to support their mental health during Covid-19 restrictions. *Frontiers in Digital Health* **3**, 763876. https://doi.org/10.3389/fdgth.2021.763876.

Press Information Bureau (2023, January 31). *Economic Survey highlights thrust on rural development*. Ministry of *Finance*. https://pib.gov.in/PressReleasePage.aspx?PRID=1894901

Rajgopal T (2010) Mental well-being at the workplace. *Indian Journal of Occupational and Environmental Medicine* **14**(3), 63–65. https://doi.org/10.4103/0019-5278.75691.

Ramiro BMF, **Dominguez SG and Sanguino CG** (2024) Stigma towards child and adolescent mental health problems among fathers and mothers. A cross-sectional study. Clinical & Health. *Journal of Empirical Research in Psychology* **35**(1), 27–33.

Salaheddin K and Mason B (2016) Identifying barriers to mental health help-seeking among young adults in the UK: A cross-sectional survey. *The British Journal of General Practice* **66**(651), e686–e692. https://doi.org/10.3399/bjgp16X687313.

Shetty R (2023, January 24) Breaking the Stigma: Addressing Mental Health in India. *Times of India.*

Singh OP (2018) District mental health program – Need to look into strategies in the era of mental health care act, 2017 and moving beyond Bellary model. *Indian Journal of Psychiatry* **60**(2), 163–164. https://doi.org/10.4103/psychiatry.IndianJPsychiatry_304_18.

Singh S and Sagar R (2022) Online psychotherapy during the COVID-19 pandemic: The good, the bad, and the ugly. *Indian Journal of Psychological Medicine* **44**(2), 177–180. https://doi.org/10.1177/02537176211070427.

Sandhu, G. (2020, October 09). India has 0.75 psychiatrists per 100,000 people. Can telepsychiatry bridge the gap between mental health experts & patients? *Economic Times*. https://economictimes.indiatimes.com/magazines/panache/india-has-0-75-psychiatrists-per-100000-people-can-telepsychiatry-bridge-the-gap-between-mental-health-experts-patients/articleshow/78572684.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

Tesch-Römer C, **Motel-Klingebiel A and Tomasik MJ** (2008) Gender differences in subjective well-being: Comparing societies with respect to gender equality. *Social Indicators Research* **85**(2), 329–349.

The Hindu (2020, March 19) Paying Guests Find 'Work From Home' a Struggle. Available at https://www.thehindu.com/news/cities/bangalore/paying-guests-find-work-from-home-a-struggle/article31111829.ece

Tibbs M, **O'Reilly A**, **Dwan O'Reilly M and Fitzgerald A** (2022) Online synchronous chat counselling for young people aged 12-25: A mixed methods systematic review protocol. *BMJ Open* **12**(4), e061084. https://doi.org/10.1136/bmjopen-2022-061084.

Trani JF, **Bakhshi P**, **Kuhlberg J**, **Narayanan SS**, **Venkataraman H**, **Mishra NN**, **Groce NE**, **Jadhav S and Deshpande S** (2014) Mental illness, poverty and stigma in India: A case–control study. *BMJ Open*. **5**(2), 1–12. https://doi.org/10.1136/bmjopen-2014-006355.

Webb CA, **Rosso IM and Rauch SL** (2017) Internet-based cognitive-behavioral therapy for depression: Current Progress and future directions. *Harvard Review of Psychiatry* **25**(3), 114–122. https://doi.org/10.1097/HRP.0000000000000139.

World Health Organization (2022, June 08). *Mental Disorders*. https://www.who.int/news-room/fact-sheets/detail/mental-disorders

Zerwas SC, **Watson HJ**, **Hofmeier SM**, **Levine MD**, **Hamer RD**, **Crosby RD**, **Runfola CD**, **Peat CM**, **Shapiro JR**, **Zimmer B**, **Moessner M**, **Kordy H**, **Marcus MD and Bulik C** (2016) CBT4BN: A randomized controlled trial of online chat and face-to-face group therapy for bulimia nervosa. *Psychotherapy and Psychosomatics* **86** (1), 47–53. https://doi.org/10.1159/000449025.

Zieger A, **Mungee A**, **Schomerus G**, **Ta TM**, **Dettling M and Angermeyer MC** (2016) Perceived stigma of mental illness: A comparison between two metropolitan cities in India. *Indian Journal of Psychiatry* **58**, 432–437.

Appendix

Questions relating to the SUW and satisfaction:

(1) Rate your Wellness levels on a scale of 0 to 10
(2) (After Intervention) Rate your wellness levels on a scale of 0 to 10.
(3) On a Scale of 1–5 rate how well you are satisfied with the session

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