

# Research on Methods to Enhance User Stickiness in Online Healthcare Platforms - A Case Study Based on Yilu

Zhangling Li<sup>1, †</sup>, Yian Lyu<sup>2, †, \*</sup>, Xiaoyu Ruan<sup>2, †</sup>

<sup>1</sup>School of Economics and Finance, Queen Mary University of London, London, England

<sup>2</sup>BSc (Hons) Management (Accounting and Finance), University of Manchester, Manchester, Greater Manchester, United Kingdom

\*Corresponding author: [yian.lyu@student.manchester.ac.uk](mailto:yian.lyu@student.manchester.ac.uk)

†These authors contributed equally.

**Abstract.** As the population grows in China, the proportion of national spending on healthcare has increased, which promoted the development of China's internet healthcare industry. However, the number of active users in China's Internet healthcare industry is not desirable. Many users still have trust problems with online medical consultations. User stickiness and usage rates have become one of the challenges of the current Internet healthcare platforms. This paper uses Ali Health as an example to examine ways in which online healthcare platforms can enhance user stickiness. By using the case study method, it is found that there are only three ways for Yilu to enhance user stickiness. From the perspective of traffic drainage, Yilu can expand its business to multiple platforms by taking advantage of the parent company's advantages and actively innovating traffic drainage methods. Emotionally resonate with users and attracts more users. From the perspective of products, Yilu uses a series of comprehensive high-quality services, and reliable products like its medicines to increase its user stickiness. From an operational point of view, Yilu's WeChat community, membership system, and points system can also help enhance their user stickiness. Through research on Yilu's method of enhancing user stickiness, it can provide a reference for other enterprises in China's Internet medical industry to meet users' needs, continuously improve platform services, and ultimately achieve healthy industry development.

**Keywords:** Online Healthcare Apps; China Healthcare service; Medical care; User stickiness, Digital Marketing.

## 1. Introduction

With the population aging and the population growth in China, the proportion of national spending on healthcare has increased, which promoted the development of China's internet healthcare industry. Internet healthcare refers to a combination of the Internet and traditional healthcare industry, which uses high tech (e.g. big data, Internet of Things) as a base to form a new type of medical and healthcare service. China's Internet healthcare has emerged since 2010 and has grown rapidly in 2014 and 2019 [1]. As a highly developing industry, the Internet Healthcare Industry has developed a wide range of businesses, including doctor's assistants, medical registration and medical consultation, pharmaceutical e-commerce, healthcare management, etc. The growth rate of pharmaceutical e-commerce is the fastest. It has reached a market size of over 157 billion CNY in 2020, and the growth rate exceeded the GDP growth rate in the following years [1]. In addition, the development of the Internet medical industry has also received strong support from the government. There are now 7,700+ level 2 hospitals and above providing online booking and online medical services, with 50% of level 3 hospitals offering online healthcare services to the public [2]. However, the number of active users in China's Internet healthcare industry is not desirable. Many users still have trust problems with online medical consultations. User stickiness and usage rates have become one of the challenges of the current Internet healthcare platforms. For example, the largest online medical platform in China, Pingan Doctor, has over 400 million registered users, but only 72.5 million active users. The active user rate is less than 25% [1]. Among the many internet medical platforms, Ali Health (which now has changed its name to YiLu), a subsidiary company of the Ali Group, has the largest user base, with 690 million active users and 110 million active consumers, and its users have

a high stickiness to the app. This shows that YiLu's marketing and ecology have been very successful in attracting users and enhancing user loyalty. This addresses the problems of the low user active rates in the internet healthcare industry and users' distrust of online healthcare platforms. This paper uses Ali Health as an example to examine ways in which online healthcare platforms can enhance user stickiness. The focus is on the layout of the company's ecology, the way Ali Health attracts users, the product design, and the after-sales service. This paper aims to summarize the marketing methods used to increase user stickiness through the study of the YiLu App and to provide a successful sample for sustainable development in the internet healthcare industry.

## 2. Ali Group

Ali Group has generated its strategic development in the online healthcare industry since 2015. Its main strategy is to build a mutually supportive business ecosystem and aims to achieve an integration from medical consultation to medical insurance. By far, Ali's overall strategic planning in the online healthcare sector can be divided into two main parts, which are building a platform and making extensions. Ali Health is the only online healthcare platform of Ali Group. Other Ali Group platforms (e.g. Alipay, AliCloud, Taobao, Tmall, Nails) use their advanced technical advantages and user resources to attract more users to Ali's healthcare platform. Through this combination of platform building and business extension strategy, Ali was able to complete its strategic plans in B2B+B2C+O2O channels and established an integrated service in the healthcare sector. The company has also cooperated and combined with XiaoLu Internet Hospital to create the first online medical platform combining Chinese and Western medicine on the Internet. In terms of overall strategic layout (see Figure 1) YiLu's business is divided into four major segments (internet healthcare, pharmaceutical e-commerce, smart healthcare, and consumer healthcare). Ali Health Pharmacy, the Tmall Pharmaceutical Platform, and the personal individual healthcare management that is set up on Taobao and Tmall have generated the most revenue for Ali Health.

In the design of the APP, YiLu has opened several entrances (expert medical consultation, video screen entrance) for patients' convenience in seeking medical consultation. It also divided doctors into experts and general doctors. The service is available 24 hours a day. This saves users a lot of time in registering or waiting. In addition, YiLu has not only opened a personal file to record the patient's chronic medical history, but also to avoid the loss of medical record cards or the incompatibility of medical record cards. There are many additional services on the App such as health management and medication reminders to increase the interactivity between the platform and the user.

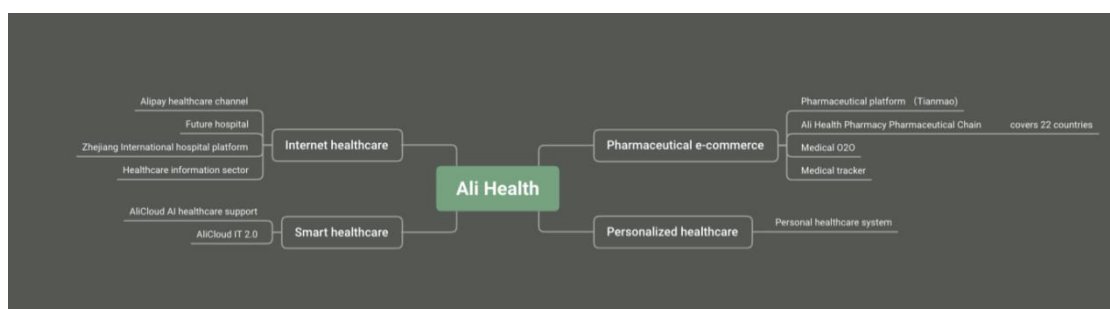


Fig. 1 Ali Health Strategic Layout [3]

## 3. Drainage Method

### 3.1 Drainage from Its Own Platform

From the perspective of drainage, relying on the various resource advantages of the parent company and focusing on users, Yilu creates online and offline integrated medical services. Moreover, it provides users with more convenient medical services in a more professional and safe way, satisfying the needs of different users.

Currently, Yilu is actively expanding its service dimensions and business to multiple platforms. It is also actively taking advantage of the traffic advantages of Alibaba's ecological platforms, including Taobao, Tmall, Alipay, UC, and other platforms, to easily acquire target users and provide them with comprehensive professional services and medical solutions. At the same time, using technologies such as the Internet of Things, it combines self-operated business and new retail business to create an online and offline comprehensive health management platform. As of March 2022, the annual active users of Alipay's health channel reached 690 million, a year-on-year increase of 170 million [4].

## **3.2 Innovative Drainage Methods**

### **3.2.1 Sleep Good Sleep**

Yilu and Youku Video, breaks through the traditional marketing methods in the medical and health i Yilu is also using innovative drainage methods to attract more users. The talk show "Sleep Good Sleep," jointly created by ndustry. Through the combination of content delivery and e-commerce marketing, it hits the pain points of users, sparks topics, and provides the show for the show. Heyilu attracts a large number of target users. According to the principle of affordability, users can exchange information with users on the platform by watching programs, thus enhancing the connectivity between the platform and users, thereby increasing user stickiness [5, 6].

While popularizing sleep-related knowledge for users, the program also recommends related health products. A link to Yilu has been added to the pause advertisement page so that users can go directly to the main venue with one click. By delivering content to users, combining product marketing, and giving emotional value to products, it resonates with users. At the same time, making full use of Alibaba's ecology and other resources, it also launched a series of activities with the theme of "sleep well." Furthermore, this presents users with the best broadcast and comprehensive spread effects. By the end of the show, Baidu had more than 100 million related searches [7].

### **3.2.2 High-quality services and reliable products**

From the perspective of products, Yilu increases its user stickiness through a series of comprehensive high-quality services and reliable products. According to the paper "Customer satisfaction analysis using SPSS based on CCSI Model", in the latent variable of customer satisfaction of mobile medical platforms, the expected quality has a direct and positive influence on customer satisfaction in the mobile medical platform [8]. The expected quality includes customers' expectations of the medical platform service being reliable and personalized. Firstly, to meet the personalized services, Yilu categorized its services towards different groups, including customers from each age and circumstance. For instance, aiming to deal with the needs of chronic disease patients, the elderly, pregnant women and people who want to lose weight, Yilu's health management services will match each group with professional services and personalized health management plans, like the chronic disease management services, management services during the pregnancy and the weight loss management services. Particularly, Yilu focuses more on its chronic disease management services since the middle-aged customer group is located in the dominant position in Yilu. The World Bank's study of chronic diseases in China predicts the number of people aged over 40 who have chronic diseases will triple in the next 20 years. Based on Yilu's annual report for 2022, the number of users for chronic disease health management services reached 6.5 million in June, an increase of 119% compared to last year [9]. Also, the repurchase rate increases rapidly. Then, Yilu's high-quality medicine and professional doctors have met the expectation of customers of having reliable services and products. The quality of the medicine is highly regulated by the Yilu platform and customers can trace it back to the pharmaceutical manufacturers. Besides, Yilu has a large and professional team that includes 160,000 doctors, pharmacists, nutritionists and others. Especially, Yilu is the first online medical platform that has Chinese medicine services and 76,000 Chinese medicine practitioners [4]. Moreover, in the Yilu APP, 97% of the consultants for c-end users come from level three hospitals, which also highly accords with users' consideration of the internet medical platform. A survey from Yiou think-tank mentioned that when choosing an internet-based medical platform, 72% of users will

consider the level of the hospital where the platform doctor works [10]. In China, hospitals are divided into three levels based on their professionalism, with the level three hospital receiving the highest recognition. While users need medical consultation services, the Yilu app can quickly and accurately match the user to level three hospitals for online consultation within 24 hours. And the Yilu app includes a customize service for private records, making it easy to track personal medical history. The results of Pan Tao's research on influencing factors of users' participation behaviour based on the SOR model in online health communities show that information support in the health community has a positive effect on users' participation [11]. Yilu's free value-added service, "Medically informed deer", a medical think tank, supports users with information supports like disease prevention and treatment. The content includes disease prevention, full-process treatment plans, symptom judgment, rehabilitation suggestions, as well as nutrition and diet conditioning and other information from pan-health fields. During the outbreak, users can also search about the whole process of drug and food distribution and vaccine information.

### 3.2.3 Operational systems

From an operational point of view, Yilu's WeChat community, membership system, and points system can also help enhance their user stickiness. The interactive features offered by the Internet medical platform can provide users with more social support. It also verifies that the interactive characteristics of the internet medical platform can improve the user's willingness to use the internet medical platform [12]. A structural equation modelling (SEM) analysis of data collected from 260 valid questionnaires from Sina enterprise micro bloggers in 2017 also found that customer engagement had a direct and positive impact on customer stickiness [13]. In Yilu APP, users can not only interact with professional doctors through the consultation process but also communicate with some professionals in Yilu's WeChat groups. Yilu builds a community based on the WeChat application to increase user stickiness, by having the Yilu WeChat video account and the Yilu WeChat group. WeChat is one of the world's most popular social media messaging apps, with over a billion monthly active users. It is also a key platform for businesses like Yilu looking to engage with consumers in China and build a brand community. Yilu has a WeChat video account that uploads professional health solutions from famous doctors, thus attracting users to the community or individual users.

Also, Yilu launches a WeChat group community for chronic disease communication and rehabilitation, which greatly enhanced the interaction between users and the platform. Yilu's Wechat group provides extra health consultation services, shares medical-related knowledge, and organizes activities like answering health-related questions and dividing up the cash red envelopes. Besides, to better manage the personal data and problems of WeChat users, Yilu launched a WeChat personal account called "xiaokangfu". The establishment of a membership system and the system of collecting points that can help e-commerce platform to retain users [14]. Yilu attracts users to join Taobao and Tmall for free by offering membership coupons and membership specials on multiple platforms (Taobao, Tmall, Meituan). And members of Yilu can continue to have membership-only activities, and vouchers, and use the consumer points to get gifts like home appliances, cosmetics, points redeemable coupons and other activities. In addition, members of Yilu can continue to have VIP services from any of Alibaba's applications, such as vouchers and free discounts. More than 160 million users continue to join Alibaba Health members for free discounts or special offers and earn points for upgrading their membership by browsing through buying products, and evaluating products [4]. The membership system and the points system from Yilu can effectively maintain user retention rates and improve user stickiness.

## 4. User Stickiness Evaluation

Yilu has built a complete membership system and established an Alibaba-based medical ecosystem to prevent user loss. Relying on the huge traffic of the parent company Alibaba, it has attracted a huge user base. Moreover, Yilu cooperates with multiple platforms to create attractive and emotionally

resonant programs and activities that enhance user interaction and emotional communication. It effectively attracts users' attention, thereby retaining effective users and generating user stickiness.

At the same time, relying on high-quality products and services, Yilu has attracted many users. By creating a full range of medical and health services, Yilu has launched products that meet the needs of all age groups to meet the needs of various users. Whether it is drug sales, doctor's diagnosis, treatment, or vaccine appointments, Yilu is helping users with the most comprehensive products and best services. According to the research report, the repurchase rate of users of Yilu in the past year has increased compared with the same period, and the market prospect is broad [15].

Yilu also helps users earn points through its unique interactive operation model, which can be used on multiple platforms, attracting the participation of a large number of users. At the same time, Alibaba Health can use Alibaba's big data analysis to classify users' participation, topics of interest, and consumption habits to achieve personalized push. Alibaba Health has launched a communication community with multiple platforms to build a platform for users to communicate with each other, enhance communication between users, and attract external traffic to the platform. The interactive communication mode enables users to have a deeper understanding of the services provided by the platform, leave valuable comments for the platform, and help improve the platform's service quality, attracting more users, forming a positive cycle, and enhancing user stickiness.

## 5. Conclusion

Taking Yilu as an example, this paper analyzes the user stickiness of Internet medical enterprises from the perspective of user attraction, product service, and operation mode. It provides references and suggestions for other related enterprises, but parts still need improvement. This paper only analyzes Yilu, but it has a natural advantage in attracting user traffic and is only useful for some companies. In addition, most of the analysis data come from financial reports, which may lack completeness. In the future, users can be classified to build a complete user stickiness model.

With the support of national policies, people's health awareness, and population aging, the development of the Internet medical industry has attracted much attention. How to attract users and how to enhance user stickiness is a challenge that enterprises must face.

## References

- [1] Aon 2020 Medical Product Analysis Report. May, 30, 2020. Retrieved on October 5, 2022. Retrieved from: <https://www.woshipm.com/evaluating/3897681.html>
- [2] National Health Commission. There are 7,700 hospitals above level II across the country that provide online services Internet medical treatment makes it easier to see a doctor. March 26, 2021. Retrieved on October 5, 2022. Retrieved from: [http://www.gov.cn/fuwu/2021-03/26/content\\_5595808.htm](http://www.gov.cn/fuwu/2021-03/26/content_5595808.htm)
- [3] Aon. Accelerating the integration of Alibaba's ecosystem, Ali Health's revenue increased by 108.6% year-on-year. May 16, 2019. Retrieved on October 5, 2022. Retrieved from: [https://www.sohu.com/a/314448642\\_114986](https://www.sohu.com/a/314448642_114986)
- [4] FY 2022 annual report. Alibaba Group. (n.d.). May 25, 2022. Retrieved on October 7, 2022, Retrieved from <https://site.irasia.com/listco/alibabagroup/en/reports.php>
- [5] Bucher, T., & Helmond, A. The affordances of social media platforms. *The SAGE Handbook of Social Media*, 2018: 233–253.
- [6] Van Dijck, J. The culture of connectivity. January 24, 2013. Retrieved on October 7, 2022, Retrieved from: <https://doi.org/10.1093/acprof:oso/9780199970773.001.0001>
- [7] China. com. Sleep Good Sleep. March 5, 2020. Retrieved on October 7, 2022, Retrieved from: <https://movie.huanqiu.com/article/9CaKrNkriWR>

- [8] LEI Yi-lin, GUO Xia, YANG Lu, Research on User Satisfaction of Mobile Medical Platform Based on CCSI Model——Take Good Doctor Online as an Example, *Posts and of College Telecommunications of Nanjing university*, 2020, 41(03): 47-50.
- [9] World Bank. Create a healthy and harmonious life and curb the prevalence of chronic diseases in China.  
Retrieved on October 7, 2022, Retrieved from:  
<https://documents1.worldbank.org/curated/en/621841468023051158/pdf/>, 2021.
- [10] Yiyou think tank, Retrieved on October 7, 2022, Retrieved from: <https://www.iyiyou.com/research>  
Copyright reserved to EqualOcean Intelligence, July 2021.
- [11] Taotao Pan. Research on influencing factors of user participation behavior in online health community based on SOR model, School of Economics and management, Tongji University, 2022.
- [12] JiangWu, Shanshan Li, Research on users' willingness to use information services in online health communities, *Information science*, 2017, 35(04): 119-125.
- [13] Zhang, Mingli & Guo, Lingyun & Hu, Mu & Liu, Wenhua, Influence of customer engagement with company social networks on stickiness: Mediating effect of customer value creation, *International Journal of Information Management*, Elsevier, 2017, vol. 37(3), pages 229-240.
- [14] Qi Wang, Harbin Institute of Technology, A research on Influencing factors of Internet medical platform, 2020.
- [15] SPDB International. Ali Health: Still need to beware of short-term policies. December 22, 2021.  
Retrieved on October 7, 2022, Retrieved from:  
<http://www.spdbi.com/getfile/index/action/images/name/61c425646ff5e.pdf>