

Recommendations for Online Support Group Platforms in China

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Abstract

In China, support groups are rare and have the potential to become a more commonplace resource for people in need. The Xin Foundation, a non-governmental non-profit organization in Hangzhou, is interested in how the United States' approach to online support groups could be actualized in China. This report explores the success of support groups in the U.S., how they have been adapted to online environments, and how they can be transformed to fit China's cultural landscape. By conducting interviews, surveys, feature analysis, and user observation, we discovered new ways to innovate online support groups in China. We conclude this report with a list of recommendations for future online support group platforms and a series of mockups for a platform in China.

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Finally, a special thanks is needed to Professor Laura Roberts in the planning stage for this project. She graciously provided guidance in overcoming the challenges presented by this project and instilled in us an emotional fortitude we relied on to complete this project.

Executive Summary

Over the last forty years, China has rapidly evolved to push itself onto the world stage, averaging 10 percent GDP (gross domestic product) growth per year since 1978 and lifting 850 million people out of poverty (World Bank, n.d.). Now boasting the world's second largest economy, China has been enjoying the benefits of modernization and urbanization, but has inadvertently left issues of emotional well-being largely unrecognized and unaided. Surveys in China have revealed a glaring problem with people feeling unmotivated and unhappy with their lives, unsupported and unloved by others, or unsafe in their communities (Statista, 2015). Support for emotional well-being in China is still in its infancy and has the opportunity to draw from the successes and failures of other countries, such as the United States, to develop new resources. In particular, our project sponsor, the Xin Foundation, is interested in how the United States' approach to online support groups can be actualized as a new resource in China.

Methodology

To create a comprehensive framework of recommendations for the Xin Foundation, our team established three main objectives. First, we examined support groups in the United States and why they have been so successful. To accomplish this, we interviewed support group members and facilitators, and distributed surveys to a wide variety of organizations. We knew that this information was only a piece of the puzzle—what works in the United States will not necessarily work in China. Therefore, our next objective was to evaluate China's sentiment towards support groups. To achieve this, we collaborated with our teammates at Hangzhou Dianzi University to create and distribute surveys inquiring into the perceived value of support group practices in China. Finally, we analyzed existing online support group platforms in the United States to find ways that the Xin Foundation can innovate. Here, we studied common features and examined public message boards to understand how platforms like these can best serve their users. Completion of these objectives produced valuable key findings which informed our recommendations and our mockups of a new, innovative platform.

Key Findings

From our research, we developed an in-depth understanding of how support groups benefit individuals, the concerns they may pose to their members, and in what ways they may need to be transformed to fit into China's cultural context.

Benefits of Support Groups

To better understand the purpose of support groups, our team conducted a survey, as well as numerous interviews of support group members and facilitators to determine benefits that may arise from involvement. We found the five main benefits to be as follows:

1. Support groups give members a community and help improve their social lives.
2. Support groups help members realize that they are not alone.
3. Support groups give members a place to find help.
4. Support groups can help members find valuable resources.
5. Support groups empower members and improve their self-confidence.

These benefits all supplement and improve one's well-being by bolstering an individual's sense of purpose, their social life, and their sense of community. By having a safe environment of people that are going through the same things, individuals are able to grow alongside others and achieve a common goal. These five key benefits should be prioritized by the Xin Foundation and any new support group platforms.

Concerns for Support Groups

These surveys and interviews were also used to determine concerns in regards to support group participation. Although experiences were largely positive and benefited individuals, there were still several concerns posed by support group participants. The three most prominent concerns found were:

1. Support groups have the potential to spread misinformation.
2. Support groups can become controversial or inflammatory in nature.
3. Support groups need to have transparency in their administration.

Although these concerns were not widespread, they can threaten a support group’s ability to provide a fulfilling environment. It is important to recognize the shortcomings of existing support group models, so that stronger communities can be developed going forward. These concerns should be carefully addressed by the Xin Foundation and other new platforms that want to ensure the sustainability and efficacy of their support groups.

Cultural Considerations for Chinese Support Groups

Our team made several considerations for adapting American support group models to better fit China’s unique cultural landscape. These included:

1. The social concept of “face” is prevalent in Asian cultures.
2. China’s cultural collectivism.
3. The importance of family in China.

A study of current literature about these considerations, as well as our survey in China that substantiated prior findings led us to suggest four things:

1. Chinese support groups should emphasize peer support.
2. Chinese support groups should be hosted online.
3. Chinese support groups should emphasize being a place to offer help.
4. Chinese support groups should cater to family members of struggling individuals.

These suggestions would help reduce apprehension towards support groups caused by social stigma and the fear of losing face. They would improve member privacy and accessibility. They would also alleviate the burden of many family members who are affected by “affiliated stigma.” The Xin Foundation should take these suggestions into account when developing new support groups in China.

Recommendations

After studying existing online support group platforms and taking into account the key findings of our research, we created a set of recommendations for how we think future

platforms of this type should be designed. A series of mockups were also created to coincide these recommendations and give a concrete example of our proposed platform.

The platform recommendations we propose span four main areas:

1. The structure of sustainable online support groups.
2. The features available to online support groups.
3. The moderation of online support groups.
4. The features available to platform users.

Structure of Sustainable Online Support Groups

Maintaining activity and fostering long-term sustainability is often a difficult aspect for new online support groups. Looking at existing platforms, it was not uncommon to find groups that had experienced years of inactivity or had only a handful of active members. These were groups that lacked leadership that could stimulate an active community and take the proper steps to make it sustainable. Because of this, we recommend three things for how new platforms should structure their support groups:

1. We recommend support groups only be created by approved organizations. These would be organizations that have the resources, the understanding, and the motivation to lead a support group to success. Founding organizations would be responsible for fostering community growth, promoting active participation, and maintaining long-term activity.

2. We recommend platforms provide informational resources about support groups. The platform has the responsibility to educate users and group administrators about support groups and the function they serve. The platforms we looked at often provided user resources through FAQ (Frequently Asked Questions) sections and tutorials that we found to be extremely useful in learning the platform. Going a step forward, we recommend providing administrative resources that could help organizations operate a successful support group.

3. We recommend users be able to find support groups by category and by searching. It is important the platform makes finding and participating in support groups as easy and enjoyable as possible. Since online support group platforms are often operated by non-profit entities, most forego a commitment to maintaining modern design practices and updated user interfaces.

This can be rectified with the aforementioned structure; we found categories to be the most natural way to view group topics and searching to be extremely useful in finding specific ones.

Features of Online Support Groups

For the functionality available to each support group, we recommend three core features: an asynchronous group forum (commonly referred to as a message/discussion board), synchronous group events (events where members can meet together), and storage for group resources. In our study of existing platforms, we distinguished that sites either provided group forums or hosted group events, but never both. Implementing both of these features would open more ways that groups could interact and make a more flexible support group environment. The third feature was rare in existing platforms, so we think it would be a significant step forward for letting support groups build up a communal supply of relevant resources.

1. We recommend a group forum. On a support group's forum section, users would be able to post titled content about the group topic that could be replied to with comments or emojis. Additional information like community guidelines and systems like group polls could also be implemented here.

2. We recommend group events. Group events would be created by group administrators and could be about anything members would like. Events could be hosted in-person, through systems like Zoom or Dingtalk, or directly through the site.

3. We recommend storage for group resources. A resources section would give support groups a place to collect convenient resources they accumulate over time. These resources could be things like pinned forum posts, useful links, and relevant articles.

Moderation of Online Support Groups

Effective moderation strategies are crucial to the success of online support groups. Moderators maintain order and ensure safety in the group by removing inappropriate or misinformed content and reminding members of the group's rules. It is important that moderators are efficient, transparent, and considerate. Additionally, any platform that supports a wide range of organizations must offer flexibility in moderation. To meet these expectations, we recommend the following four features:

1. We recommend allowing users to report and block posts. By allowing users to report troublesome posts, moderators can spend less time sifting through benign content and more time addressing posts that are problematic. Because this review process is not immediate, we recommend giving users the ability to hide posts and block other users. These functions will provide a safe environment with minimal labor investment.

2. We recommend listing group rules in a forum sidebar. In order to maintain maximum visibility and moderation transparency, we recommend displaying group rules in a sidebar on every forum page. The following rules are supported by our research:

- Treat others with respect.
- Maintain confidentiality.
- Welcome others.
- No talk of illegal activity.
- No self-promotional content.
- No spam or misinformation.

3. We recommend muting users that violate group rules. Those that violate rules may be the most in need. Temporary suspension from posting minimizes the harm they can cause others while ensuring they can still reap the rewards of silent participation.

4. We recommend allowing organizations to create custom roles. Since this proposed platform can support organizations with a wide variety of facilitation and moderation techniques, we recommend allowing the creation of custom roles in every support group. With this system, group administrators could enter a name for a role and toggle their privileges from a predefined list. Roles could then be given to trusted individuals, allowing for a wide range of responsibility delegation hierarchies.

Features of User Accounts

Finally, we considered the features present in user accounts and the affordances given for user interactions. Here, we prioritized allowing users to preserve anonymity and confidentiality, but also giving users access to a host of social networking mechanics. This was to preserve the anonymous factor inherent in support groups, while also maximizing the ways

users can consume content and connect with others. As such, our three recommendations for user accounts are as follows:

1. We recommend only an anonymous username is required to create an account. Users should be able to post in group forums and join group events with only an anonymous username to identify them. This minimum requirement was common in many other platforms and shows how online environments can increase the privacy provided by support groups.

2. We recommend an extensive suite of social networking features. We believe that the closer the platform gets to functioning like a social networking site, the more appealing it can become to everyday people and the less stigma there can be associated with using it. As such, we compiled a list of common user account features that we thought fit this type of platform best.

- User avatar and profile banner.
- User bio.
- User's online status.
- User's forum activity.
- User blog.
- Private messaging.
- Friending.

3. We recommend a comprehensive user feed. This feed would aggregate posts and events from joined support groups, and posts and blogs from friends. Content aggregation like this is a fundamental part of social networking sites, providing a centralized location for users to consume curated content. User feeds would work to bring together all core platform features and give users greater accessibility to support groups and the friends they have made in them.

Contributions

Devin Coughlin

Devin led the team's research into the potential for support groups in China, including heading collaboration with students at Hangzhou Dianzi University to create and distribute a survey for evaluating sentiment towards support group practices. Within this report, Devin reviewed literature on how social stigma might affect support group participation in China, investigated cultural considerations which informed final recommendations, and analyzed interview data. Additionally, Devin aided in the distribution of surveys within the U.S and in the editing process.

Nathan Klingensmith

Nathan led the team's research into online support groups, including a review of current literature, analyses into existing online support group platforms, and observations of online support group users. Nathan also served as the primary editor to ensure quality in all sections of the paper, as well as attractive formatting throughout. Nathan authored many portions of the paper, including a significant part of the team's final recommendations. Additionally, he was in charge of designing the mockups of the team's proposed platform.

Lonna Neidig

Lonna led the team's research into support groups by survey, including the creation, distribution, and analysis of the survey's corresponding data. Lonna also led the interviewing of support group members in the United States. Within this report, Lonna examined literature on support groups and how they benefit well-being, examined the U.S. survey results in detail as well as in summary, and aided in the editing process. Additionally, Lonna was the main contact point between the team and its sponsor, the Xin Foundation.

Noah Olson

Noah led the team's outreach efforts by writing two automated web scrapers and by serving as the primary point of contact for facilitators. Noah also led the interviewing of support group facilitators in the United States. In the context of this report, Noah examined existing literature on United States support groups, described interview and web-scraping methods, analyzed results from Chinese sentiment surveys, and contributed to the team's final recommendations. Additionally, Noah served as the secondary report editor to ensure quality in all sections.

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1. Introduction

Over the last forty years, China has rapidly evolved to push itself onto the world stage, averaging 10 percent GDP (gross domestic product) growth per year since 1978 and lifting 850 million people out of poverty (World Bank, n.d.). Now boasting the world's second largest economy, China has been enjoying the benefits of modernization and urbanization, but has inadvertently left issues of emotional well-being largely unrecognized and unaided. A 2014 survey found that the majority of people in China are struggling or suffering with their purpose (72%), in their social lives (79%), or with their community (87%) (Statista, 2015). This shows several glaring problems in China; many people feel unmotivated and unhappy with their lives, unsupported and unloved by others, or unsafe in their communities (Statista, 2015). Support for emotional well-being in China is still in its infancy and has the opportunity to draw from the successes and failures of other countries, such as the United States, to develop new resources. In particular, our project sponsor, the Xin Foundation, is interested in how the United States' approach to online support groups can be actualized in China.

Having received a generous donation in 2017, the Xin Foundation established itself as a non-governmental, non-profit organization with the sole mission of "making people more happy." In their short existence, the Xin Foundation has worked to create an application that provides mindfulness techniques for improving one's emotional state. The Xin Foundation has also partnered with Attitudinal Healing, an international organization focusing on holistic medicine, to develop an application that helps train support group facilitators. As of recently, the Xin Foundation has become interested in helping other organizations create support groups that would offer Chinese people a safe environment for personal growth.

Currently in China, pervasive social stigma prevents many people from seeking emotional support (Yang et al., 2020). Moreover, for the people that do, resources can be hard to find due to accessibility varying greatly throughout the country (Patel, 2016). China has a need for more emotional well-being resources that are easily accessible, confidential, and community-integrated. Support groups could play a key role in filling this need. Support groups rely on the assumption that people with similar experiences can relate to each other and offer authentic understanding and validation (Repper, 2011). In most cases, this means that support groups exclusively contain people with shared experiences or issues. Here, anonymity is

promoted through group solidarity. This type of support structure has seen great use in the United States and could be very beneficial to Chinese citizens if implemented correctly.

To create a report that details the functionality of support groups and their viability in China, our research team from Worcester Polytechnic Institute (WPI) partnered with four students from Hangzhou Dianzi University (HDU). As the primary researchers, our team examined how support groups work in the United States, how they have adapted to online environments, and how they can be implemented in China. To do this, we conducted multiple studies to gain in-depth knowledge about support groups, including their perceived efficacy, their regular practices, and their common problems. Online support group platforms were also analyzed to understand prevalent features in their design and to study behavioral patterns of users. Our partners from HDU helped us carry out research in China to evaluate support group viability and also helped bridge the communication gap between ourselves and the Xin Foundation.

This report will begin with a review of current literature over the multiple key areas of our research and give context to the full scope of our project. Afterward, we will specify the objectives we defined to fulfill our research goals and the methods we used to complete them. Finally, we will present our research findings, their implications, and the recommendations we gave to the Xin Foundation.

2. Literature Review

To develop a broader perspective on the utility of support groups, we investigated how they came to be in the United States, what types exist, and how they have adapted to online environments. We also investigated how support groups might fit into China's unique culture. This insight allowed us to better understand the role support groups can play in China's future and how the Xin Foundation can help support their growth

2.1 Support Groups as a Resource

Support groups are a tool commonly used in the United States to foster connections within communities and encourage growth around a specific topic. These groups do so by bringing people together in a safe and judgement-free environment to share common life experiences and learn from each other (Koch & Aden, 2014). Although these groups typically meet in person, the evolution of technology and the impact of COVID-19, have driven many online. For this subset of support groups, quantitative studies have not been able to definitively prove their effectiveness, but qualitative studies have shown that their users derive significant value from them (Robinson & Pond, 2019). As they have grown to prominence, support groups have become recognized for their ability to support an individual's well-being, emotional state, and perceived self-efficacy (Barak et al., 2008).

2.1.1 Support Group Benefits

Supports groups are utilized as a means for individuals to share their stories and find people that are dealing with similar situations (Mental Health America, n.d.). Joining a support group has numerous benefits including learning new information, finding reassurance, helping others, growing as a person, becoming empowered, and connecting with a community (Koch & Aden, 2014). In times of particular stress, individuals may seek out a support group or be directed to join one, whether it be in person or online. Finding the right support group for a specific person and situation can take time and research, but a comfortable support group goes a long way in having a valuable experience (Mental Health America, n.d.).

A review of studies looking at online support group users found that access to emotional support at any time with others that understand what they are going through is considered valuable (Robinson & Pond, 2019). Users particularly valued how virtual support group communities functioned as a safe haven where they could share intimate experiences, have their emotions be accepted and validated, and learn how to rebuild their identities (Robinson & Pond, 2019). In a study looking at in-person support groups for parents, members experienced three shifts in their identity; they were empowered to feel more in control of “the outside world,” they gained a sense of belonging and connection to a community, and became more confident and accepting of their situation (Solomon et al., 2001, pg. 126). Self-discovery and personal growth were found to be key in positive support group experiences (Solomon et al., 2001). These studies demonstrate the ability of support groups to form a community which promotes personal growth and happiness.

2.1.2 Supports Groups and their Effect on Well-being

The benefits from participating in support groups can often contribute to an individual’s overall well-being, or how “happy, healthy, or prosperous” they perceive themselves to be (Merriam-Webster, n.d.). Many factors influence one’s well-being, but they can be categorized based on Maslow’s hierarchy of needs (McGillivray et al., 2007). Though it was originally proposed to explain human motivation, the fulfillment of needs to improve one’s life underpins a measure of well-being (McGillivray et al., 2007). The hierarchy divides a human’s needs into five, ascending categories: basic, safety, belonging, self-esteem, and self-actualization (McGillivray et al., 2007). Previous insights have shown that support groups can assist with fulfilling the top three of these categories; support groups provide belonging through community, help build self-esteem through self-reflection, and help motivate self-actualization through personal growth. This multi-faceted fulfillment of one’s fundamental needs shows the immense role support groups can play in maintaining individual well-being.

The Xin Foundation is currently working to adapt the United States support group model to China in order to provide a new resource for improving well-being and overall happiness. A 2014 survey interviewing 4,696 participants found that 72% of people in China are struggling or suffering with their purpose, 79% are struggling or suffering in their social lives, and 87% are struggling or suffering with their community (Statista, 2015). These three elements (purpose,

social connectedness, and community struggles) are all categories where the introduction and development of Chinese support groups could improve Chinese well-being.

2.2 Support Groups in the United States

With an understanding of the role support groups play in maintaining personal well-being and promoting community, we now consider the unique context of their success. By drawing from the support group phenomenon in the United States (where such groups have flourished), we can find strategies for adapting the support group model to China. In this section, we examine both the historical and cultural context that has led to the inception of support groups and the types of support groups that have arisen. Through this examination, we will provide a base understanding of why and how support groups operate in the United States.

2.2.1 Historical and Cultural Context of Support Groups in the U.S.

To understand how support groups can be applied to other cultures, we begin by looking at our own. One ideal that permeates United States culture and plays an influential role in support group operation is individualism. Individualism is a Western philosophy that prioritizes the goals of the individual over those of the collective (Allik & Realo, 2004). As such, deviation from predefined norms and the pursuit of personal improvement is tolerated more frequently than in collectivist societies (Papadopoulos et al., 2013). These reasons may influence why many support groups focus on personal struggles, self-betterment, and self-discovery. Additionally, individualism's celebration of personal uniqueness and independent experiences lends itself to the emotionally vulnerable setting of support groups (Allik & Realo, 2016). Because of its connection to individualist ideals, the United States support group model may not be initially compatible with China, a country that many still consider to be collectivist (Steele & Lynch, 2013). We will examine this cultural limitation, and ways to overcome it in later sections.

When considering the applicability of support groups to other cultures, it is worth examining the historical context of their conception. Support groups' rise to prominence in the U.S. can be traced back to the late 1960s and early 1970s (Weller, 2012). Leading up to this point in time, the U.S. made significant progress in understanding the magnitude of mental health problems in the country and coming up with solutions to combat them (Cowen et al., 1969). In 1963, President Kennedy passed the Community Mental Health Act and ordained that

“henceforward the prevention, treatment, and rehabilitation of the mentally ill... [would] be considered a *community* responsibility” (Caplan, 1964 as cited in Cowen et al., 1969, p. 11). The passage of this law represented a move towards deinstitutionalization and the deliberate integration of community members, a major step forward in better mental health care (Murphy & Rigg, 2014). As part of this changing ideology, mental health activist groups like WANA (We Are Not Alone) began encouraging the creation of small, unfunded, self-help groups composed of former institutional patients that provided peer support and education about community services (Weller, 2012). Over time, activism for mental healthcare resources grew and support groups were proven to be useful tools for many people.

Since the 1970s, the focus of support groups in the United States has expanded beyond the realm of mental health. Most commonly, many modern support groups help members recover from things like substance abuse, gambling, eating disorders, and addiction (Mental Health America, n.d.). Other groups emphasize well-being support amidst stressful or emotionally taxing situations. Grief, parenting, academics, activism, and COVID-19 related support groups are prolific examples of this variant (Group Peer Support, n.d.). Even informal interest groups such as book clubs have (often inadvertently) implemented support group elements. In these types of groups, discussion and reflection about shared experiences results in members building deep relationships and learning from each other (Haupt, 2011). This expansion of the support group model is indicative of its versatility and potential.

Researchers from the University of Kansas estimate a total of 500,00 self-identified support groups exist with 6.25 million active members between them (Fawcett, n.d.). With 1.3 million members spread across 65,000 groups, Alcoholics Anonymous represents a significant portion of these (A.A. General Services Office, 2019). While many interest groups do not identify as support groups, their ability to bring people together and offer qualities of a support group cannot be ignored. Facebook, a popular platform for group creation, hosts over 10 million different interest groups with over 1.4 million monthly members (Facebook for Business, 2019). The popularity of support groups in the United States demonstrates the essential part they play in community-based recovery and well-being support.

2.2.2 Types of Support Groups: Systematic, Peer, and Social

On the whole, support groups promote building a supportive community through shared life experience (Koch & Aden, 2014). However, their organizational structure can vary

substantially based on their individual goals and subject matters. The distinction posed by the National Multiple Sclerosis Society (NMSS) in their Guidelines for Managing Self-Help Groups is useful in clarifying these differences. For the sake of our research, we have adapted their definitions into three types of groups: *peer support groups*, *systematic support groups*, and *social support groups*. *Peer support groups* are sometimes referred to as 'self-help' groups as they are peer-led, or led by someone who has shared the same experience as the other members. *Systematic support groups* are led typically by professionals or trained individuals that work to attain specific goals for its members. *Social support groups* are led informally as they are less defined and focus more on social time and networking. We explore examples of these three variants in the following paragraphs.

Addiction recovery groups, such as Alcoholics Anonymous (AA) and Narcotics Anonymous, are examples of *peer support groups*. Groups like AA rely on the notion that all members have the desire to quit their addiction and as such, are in some stage of recovery or sobriety (Monico, 2020). For Alcoholics Anonymous, the only defined structures are the Twelve Steps and the twelve traditions. The Twelve Steps are a set of foundational stages members traverse on their personal journey towards recovery (Monico, 2020; Alcoholics Anonymous, 2019). To support this journey, the twelve traditions give guidelines on facilitating an AA group; some of these include maintaining group anonymity and never refusing membership to someone who wishes to recover (Alcoholics Anonymous, 2019). AA itself has no central authority and minimal organization, and as such, relies on the conscience of individual groups to conduct their affairs according to the AA way (Alcoholics Anonymous, 2019). As a *peer support group*, AA allows for flexibility by structuring meetings around experiences of leading members.

Groups that focus on physical and mental health, like those of the National Alliance on Mental Illness (NAMI), are often examples of *systematic support groups*. These groups are guided by a facilitator who is responsible for guiding healthy and purposeful discussions (Mental Health America, 2016). The facilitators of these groups are trained individuals who may or may not share the same first-hand experience as the group members (Mental Health America, 2016). Meetings of these types of groups are often curriculum-based or topic-focused where the facilitator will follow an educational model or focus on a particular area of interest (Mental Health America, 2016). This is different from the open forum type meetings of *peer* and *social support groups* where members can freely talk about anything they want (Mental Health America, 2016). *Systematic support groups* follow a stricter structure and process to their

meetings to cultivate an environment that is conducive of accomplishing their established goals (Mental Health America, 2016).

Social support groups are less clearly defined as the other two types due to their lack of self-identification and organizational structure. Groups that focus on common interests, like reading and fitness, or non-stigmatized topics, like parenting and academics, are potential examples of these types of groups. Even though they may build communities around shared experiences, most do not market themselves as support groups at all. Due to this flexibility in definition, meetings in *social support groups* are often unrestricted and can move to encompass matters far beyond the designated topic. As such, these groups tend to foster closer connections between members as they have the opportunity to share more diverse experiences.

2.3 Online Support Groups and their Role as a Social Network

Online support groups, or OSGs, represent how support groups have adapted to the digital era by molding their fundamental structure into an online environment. These environments range from discussion forums, to group chats, to virtual meetings. Being an online hub for social support, OSGs play an important role as online social networks that connect people together, facilitate their interaction, and control the flow of information. As such, each OSG has a different structure to fit its needs and different methods of moderation to uphold that structure. But because of their shared foundation as support groups, OSGs all develop and grow their structure in a similar manner. Every OSG operates the same in how their social networks evolve to create a self-sustaining support group.

2.3.1 Development and Growth of Online Support Group Networks

The development of an OSG's social network is heavily influenced by the idea that members can join or leave at any time, and can participate as much or as little as they would like (Barak et al., 2008; Chewning & Montemurro, 2016). This flexibility in membership and participation affects how and when people choose to actively interact with an OSG. In particular, it creates a reliance on a group of core members that can promote interaction, especially during early stages of OSG development. In a study conducted into how OSGs form and evolve over time, it was found that the presence of highly active members is needed to create a baseline of

support upon which other members can derive value and understand the norms of interaction; from this, inactive members can decide if they would like to contribute or not (Chewning & Montemurro, 2016). As in this aforementioned study, it is often important that the creator of an OSG also be an active member that can create relevant content to engage potential members and kickstart the group's growth.

Because of the need for active participation in an OSG, growth of a support group can be hindered by the existence of "lurkers," or people that silently view discussions instead of contributing themselves. Although, this can be reconciled by viewing inactive members as a latent network of people who have the potential to begin participating at any time (Chewning & Montemurro, 2016). As inactive members reap the benefits of viewing active discourse, they strengthen their commitment to the network and get positive reinforcement that people are likely to respond in friendly and supportive ways (Chewning & Montemurro, 2016). Indirect participation has the potential to create a sense of belonging amongst the group that increases emotional closeness and affective intimacy; this emotional connection has been shown to positively influence posting frequency in other social networks (Rau et al. 2008). Through this continuous creation of group solidarity, an OSG is able to become self-sustaining as new people begin participating even when others stop.

2.3.2 Functionality and Structure of Online Support Groups

The dichotomy between active and inactive members represents how an online medium allows people to derive support from both direct and indirect methods. OSG members are allowed to directly exchange information between one another, or simply observe and absorb existing exchanges of information (Chewning & Montemurro, 2016). As such, "the structure of [an] OSG allows for more fluid and comprehensive access to social support" (Chewning & Montemurro, 2016). This gives online support groups two core functionalities: connectivity and communality. Connectivity gives people the ability to have direct exchanges and point-to-point communication over a shared topic, while communality allows for a group to collectively compile information and gradually build a repository of useful resources (Fulk et al., 1996). These two functions work in tandem to form an operational OSG that supports the flexible social network of a support group. The way these functions operate differ based on the chosen structure of a particular OSG. In practice, OSGs have two fundamental components to their structure: synchronicity and formality.

For synchronicity, an OSG can either facilitate interaction on a synchronous or asynchronous time scale. Synchronous OSGs mirror in-person support groups by functioning in real-time with members meeting together in a virtual setting; oppositely, asynchronous OSGs use the convenience of technology to create a less time-reliant atmosphere where members can post content and interact with each other over any period of time (Gary & Remolino, 2000). While synchronous OSGs implement more instantaneous communication systems like chat rooms and video conferencing, asynchronous OSGs use archival systems like online forums and message boards. Synchronicity has effects on both the connectivity and communality of online support groups.

Functional connectivity changes based on the way members are allowed to communicate and connect with each other. In asynchronous communication, people are often more comfortable to share and self-disclose since they can interact at their own pace, can spend more time crafting responses, and have the option to disengage at any time (Egbert, 2019). This decreased social inhibition can be positive by promoting honest self-disclosure and interpersonal intimacy, but also negative by leading to inappropriate behavior and over self-disclosure (Barak et al., 2008). Functional communality is altered by the method of communication and how it affects the storage of group knowledge. In synchronous settings, knowledge is stored by the group members and can only be shared at their leisure. In asynchronous settings, knowledge is archived like a database in the group forum and is thus readily accessible at any time.

Formality is the second component of an OSG's structure and (like synchronicity) can be separated into two categories: formal and informal. In a formal OSG, members are expected to focus more on the exchange of information and sharing of personal experiences than on "casual chitchat" (Maclachlan et al., 2020). In a more informal OSG, members are encouraged to build close, personal relationships that can provide support beyond the designated group topic. Both formal and informal social networks provide members with a sense of belonging, security, and community, and that people really "get them," but affect the functions of connectivity and communality (Chewning & Montemurro, 2016).

Just like asynchronicity, formality's moderation of communication affects a group's functional connectivity. Formal OSG environments are commonly seen in health-related support groups and groups that revolve around improvement and goal acquisition. This is because intimate, one-on-one relationships have the possibility of negatively affecting individual self-improvement (Alrobai et al., 2018). Informal, more casual OSG atmospheres are common

among less stigmatized topics and can be seen as a social club of valued friends that offers emotional support on a broader scale (Maclachlan et al., 2020). Formality also affects functional communality as the subject of an OSG's conversations is directly related to the compilation of its resources. Staying on topic in a formal OSG means continuously creating a larger collection of relevant resources, while going off topic in an informal OSG fills the group with irrelevant information and decreases the quantity and quality of resources amongst the group.

2.4 Support Groups in the Context of China

In China, traditional beliefs have produced negative perceptions and heightened stigmas around individuals struggling with emotional well-being.(Yang et al., 2020). One Chinese study found that the majority of Chinese residents believe that anxiety and depression are problems that people can just “snap out of” (Yang et al., 2020). Unfounded fears and misunderstandings about mental well-being are prevalent throughout the country (Ran et al., 2005). The presence of a collectivist ideology has also likely affected individual perceptions and contributed to the perpetuation of stigmatic attitudes (Steel & Lynch, 2012; Yang et al., 2020). In the following section, we will investigate how mental well-being is viewed in China and how support groups can be adapted around this view.

2.4.1 Effects of Social Stigma in China

In China, people perceive those with depression and other emotional challenges as “bu zheng chang,” or abnormal; when interviewed, affected individuals have reported being described as “incapable,” “crazy,” and “unfit” (Yu et al., 2018). This discriminatory perception demonstrates the pervasive social stigma in China towards people that struggle with their emotional well-being. A community study carried out in China evaluated both the personal and perceived stigma that exists towards depression (Yang et al., 2020). Personal stigma described the stigmatic views held by the participant, whereas perceived stigma described the stigmatic views held by others. The study found that 83.4% of participants perceived there to be external social stigma towards depression (Yang et al., 2020). Although there was less personal stigma (53.0%), the greater amount of perceived stigma may more accurately represent reality due to

the Chinese propensity to endorse publicly-held beliefs over their own (Yang et al., 2020). This high level of perceived social stigma negatively affects individuals who are already struggling.

For many people living with depression or anxiety, social stigma is a significant barrier to seeking much-needed help (Davey-Rothwell et al., 2018). Affected individuals are often trapped between hiding their stigmatized identity and disclosing it in order to seek help (Dave-Rothwell et al., 2018). The fear of potential repercussions from society has led many to hide their mental health status from everyone outside their close family circle (Yu et al., 2018). Families are not necessarily a safe place however, as “affiliate stigma” can affect family reputation; this is stigma caused by the mere association with a stigmatized individual (Yu et al., 2018; Mak & Cheung, 2008). The importance of interpersonal relationships in Chinese society heightens the sense of affiliate stigma among family members. This type of stigma can be especially damaging in Chinese social structures due to sensitivity around being marked as “different” or having family reputations damaged (Yang et al., 2020). The idea of maintaining “face (dignity, reputation, status and public image)” is critically important to many Chinese families and is often essential to function in Chinese society (Yang et al., 2020). Because of these stigma-induced inhibitors to pursuing help for emotional problems, formal support group attendance could encounter cultural resistance.

2.4.2 Effects of a Collectivist Society

Another reason support groups could face resistance in China would be due to societal collectivism. As mentioned earlier, collectivism prioritizes the needs, goals, and aspirations of the collective over those of the individual (Steele & Lynch, 2012). In regards to how this affects happiness and well-being, American students have been shown to assert the importance of personal agency while Chinese students assert the importance of fulfilling social expectations (Eid & Larsen, 2007). This difference between collectivism and individualism shows how people in a collectivist society, like China, are less likely to consider personal factors in their perception of well-being (Eid & Larsen, 2007). Because Chinese people are more concerned with maintaining social harmony and existing social structures, they are also more likely to approve of public stigmas like those surrounding mental well-being (Yang et al., 2020). A cross-sectional survey has correlated higher collectivism scores to increased stigma towards mental illness (Papadopoulos et al., 2013). In this way, collectivist ideals can counteract motivations to seek

self-help resources like support groups, and promote potential stigmas surrounding support groups and other emotional care resources.

Although, in recent years, China's socioeconomic transformations have begun making it increasingly more individualistic (Steele & Lynch, 2012). China's dramatic economic growth spurred by a transition to more capitalistic ideals has increased freedoms and encouraged people to embrace a form of individualism (Steele & Lynch, 2012). This shift in people becoming more focused on themselves (especially with younger generations) has been called a rise in "me culture" (Sima & Puglsey, 2010). This shows how China's transition towards a market economy is having more and more of an effect on people's perception of themselves as an individual (Steele & Lynch, 2012). Because of this, the Chinese are beginning to prioritize individualistic factors in the assessment of their own happiness and personal well-being (Steele & Lynch, 2012). This is evidence that in coming years, support groups may be able to play a role in maintaining individual well-being as more people realize the weight of their personal burdens.

2.4.3 Potential of Support Groups in China

For support groups to become a realistic resource in China, they must circumnavigate the existing levels of stigma towards emotional care—no easy feat. Although China is becoming more progressive in their improvement of the mental health sector, it would take "concerted effort over a prolonged period of time to bring about change in public awareness and attitude [towards mental health]" (Yu et al., 2018; Ran et al., 2005, pg. 26). Interviewing people in China about "tong ban zi ci," the literal translation of "peer support," yielded common responses of being hesitant to engage in such activities and afraid that community members would find out about their emotional struggles (Yu et al., 2018). But when talking about general activities like exercising and playing cards, people were much more open to the concept (Yu et al., 2018). This suggests that how support groups are marketed would have a large effect in how attractive of a resource they become.

Individuals struggling with their emotional well-being in China expressed feeling more comfortable sharing with peer supporters rather than trained professionals, and engaging in "implicit support" activities where stigmatizing problems were not directly discussed (Yu et al., 2018). From this sentiment, we can assume that of the three types of support groups mentioned earlier, *peer support groups* and *social support groups* would be the best fit for China's climate. These types of groups circumvent the idea of seeking professional help and are beneficial for

patients that are reluctant to ask for support (Yu et al., 2018). *Social support groups* could also give special protection and anonymity to members in China by not explicitly revolving around stigmatized topics. By taking into account these contextual factors around mental health in China, the proper adaptation of support groups could be created and prove to be a new, valuable resource to China's communities.

3. Methodology

Our goal for this project was to create a comprehensive research report on U.S.-based support groups and generate recommendations for new online support group platforms. This report and its recommendations are guided to assist the Xin Foundation in developing a future online support group platform in China. To fulfill our goal by the end of our 7-week project timeline, we completed three main objectives:

1. Interview and survey U.S. support group members and coordinators.
2. Evaluate China's sentiment towards support groups.
3. Analyze features and observe user behavior in online support group platforms.

3.1 Interviewing and Surveying U.S. Support Group Members and Coordinators

In order to understand the methods and efficacy of existing support groups in the United States, our research team interviewed support group members and facilitators about their first-hand experience. We also surveyed support group members to gather quantitative data over specific group experiences. To carry these research methods out, "automated web scraping" was used to gather a large amount of contact information for possible participants.

3.1.1 Informed Consent

Transparency was an important consideration when conducting our research studies. Letting participants know exactly what a study entails, how their information will be handled, and what potential benefits or risks arise are important in establishing trust between the researcher and the participant. To best inform participants about the intentions of our research, we assembled an informed consent document (see Appendix A). This document detailed how a participant was involved in the research study, how their information would be handled, potential risks and or benefits associated with participation, as well as contact information for the entire research team. This document served as the basis for consent in all forms of research and was continually referenced throughout this project.

3.1.2 Contacting Target Populations

To quickly gather a large list of support group facilitators and organizers, we employed Python scripts using the BeautifulSoup and Selenium frameworks to pull contact information from public databases. This process is known as automated web scraping (Breuss, 2019). Our team primarily targeted WPI's list of clubs and National Alliance on Mental Illness (NAMI) listings for "Connection" and "Family Support" groups. For each group, the name and email of a point of contact was collected and stored in a spreadsheet. Upon gathering contact info for each group, we utilized the "mail merge" feature of Microsoft Word to send out emails in bulk. For WPI clubs, emails contained a link to our survey that we requested club leaders to distribute amongst the club members (see Appendix B). For emails sent to prospective NAMI interviewees, we used an interest form to gather preliminary details such as name, organization, and affiliation (see Appendix C). It was also important to regulate how many emails were sent in bulk to prevent them getting marked as spam. As such, we only sent out a maximum of 50 emails per day.

3.1.3 Member and Facilitator Interviews

Support group facilitators have hands-on experience ensuring that their groups remain safe environments for discussion and personal growth. Similarly, support group members can speak to the successes and failures of their groups. In order to tap into member and facilitator experience, our team conducted semi-structured interviews. This interview method is flexible, following an outline of questions instead of a script (Rosala, 2019). Furthermore, interviewers are permitted to ask "probing questions" to further explore topics briefly mentioned by the interviewee (Rosala, 2019). Following this format, all interviewees were provided an outline of planned questions to assist them in preparing and organizing their thoughts (see Appendix D). When necessary, our interviewers asked clarifying questions, reordered questions, and even skipped questions if they had already been addressed. This method ensured that discussion stayed on track while providing deep insight into member and facilitator perspectives. At the start of each interview, we read our informed consent document (see Appendix A) and verbal consent was collected. Finally, notes were taken on every interview. When necessary information was extracted, interview recordings were deleted and all identifying details were removed from the notes.

3.1.4 Member Surveys

While interviews are effective in gathering detailed qualitative data, surveys are superior for gathering large amounts of quantitative data (Quinn, n.d.). In order to supplement the insight provided by interviews, our team created an online survey focusing on the experiences of support group participants (see Appendix B). Our survey utilized 5-point scaled responses that ranged between strongly disagree and strongly agree. Surveys were distributed using the aforementioned web scraping method, as well as through online Facebook support groups and personal contacts that could redistribute as a form of snowball sampling. Responses were recorded in a spreadsheet for later analysis.

3.2 Evaluating China's Sentiment Towards Support Groups

Our research team felt it was important to gain insight into how support groups might be received in China. To achieve this understanding, we designed a survey to investigate the perceived value of support group practices in China.

3.2.1 Survey

Our team created a survey targeted towards the general Chinese population to explore the potential for support groups in China (see Appendices E & F). This survey included a mixture of multiple choice demographic questions, 4-point scaled response questions, and open ended supplementary questions. The 4-point scale was specifically chosen to exclude a neutral response option and to make the edge choices appear less extreme. This was done to account for the Chinese tendency to choose middle answers and avoid extreme ones (Si, 1998). The survey was translated from English to Mandarin Chinese using a collaborative and iterative approach rather than the more traditional "back" translation. This is because using "back" translation assumes there is always a direct translation for a word or phrase, and it does not guarantee conceptual equivalence is maintained after translation (Douglas, 2007). The team at Hangzhou Dianzi University used an online survey software called 问卷星 (wènjuàn xīng), translated as "Questionnaire Star," to distribute the survey in China.

3.3 Analyzing Features and Observing User Behavior in Online Support Group Platforms

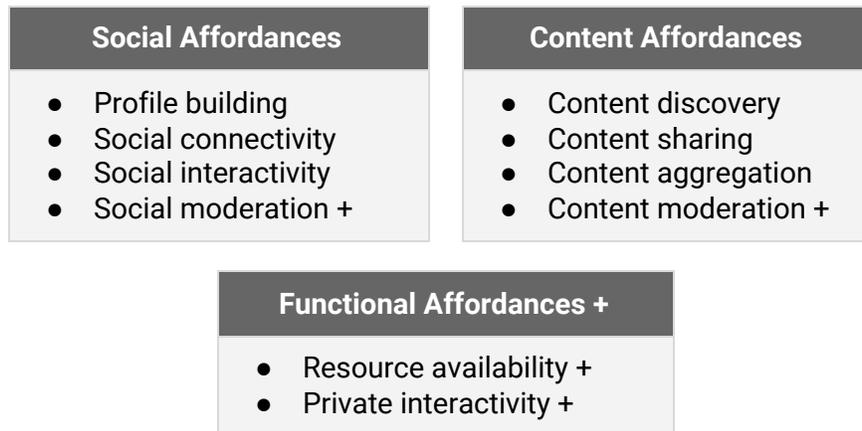
In order to provide the Xin Foundation with a thorough set of evidence-based recommendations, our research team sought to evaluate popular OSG platforms in the United States. To compile a list of these platforms, a search was done with the Google search engine using keyword sequences such as “online support groups” and “find support groups near me.” From ascertained results, we chose platforms that had at least one of three functions: *finding* OSGs, *joining* OSGs, or *participating* in OSGs. The nine platforms chosen were as follows:

- *Daily Strength*
- *The Dinner Party*
- *Health Unlocked*
- *Inspire*
- *Meetup*
- *NAMI Online Discussion Groups*
- *Support Groups Central*
- *SupportGroups.com*
- *The Tribe*

3.3.1 Feature Analysis

In order to document what features were common across these OSG platforms, we began a multi-staged feature analysis of each one. This began with us compiling a list of features present in each platform and categorizing them based on what type of functionality they provided users. For this categorization, we used the feature-level categorization framework proposed by Sheila O’Riordan and her team at University College Cork in Ireland. This framework acts as a blueprint for how to study social networking sites in terms of their affordances (high-level aspects of a system that suggests how it should be used) (O’Riordan, 2016). We expanded upon the framework as needed to support features we thought were important to an OSG but lied beyond the scope of O’Riordan’s suggested categories. The modified framework categories can be seen in Figure 1 with plus symbols signifying where we expanded upon O’Riordan’s original framework.

OSG Affordance Categorization Framework



Note. Plus symbols signify expansions to O’Riordan’s original framework.

Figure 1. Modified affordance categories for online support group platform analysis (O’Riordan, 2016).

3.3.2 User Observation

To give recommendations that also reflected how users commonly utilize these types of platforms, we worked to observe and study OSG user behavior. To meet this end, our team carried out a virtual ethnography over OSG forums as done in previous OSG studies (Zhang et al., 2018; Copelton & Valle, 2009). All ethnographic data was anonymous and collected from public forums that did not require an account to view user posts. This collection of data was free from risk as collected posts would not be publicized or quoted. Our collection efforts were focused on forum posts from multiple different support groups on several different platforms. This ethnographic data was analyzed by our team for common themes and behavioral patterns using color coding analysis.

4. Results

Through the completion of surveys, interviews, platform evaluations, and user observations, our research team gained essential perspective on U.S. support groups. We examined both member and facilitator outlooks and collected subjective and objective data. Surveys and interviews conducted in the U.S. gave us valuable insight into the positive and negative aspects of support groups. Surveys in China let us probe the perceived efficacy of support group practices, and where the Xin Foundations platform would be most accessible. Additionally, evaluation of support group platforms provided insight into the features needed to facilitate online support groups. Finally, observation of user posts within support group forums displayed trends in how users derive value from online support groups. All of these points of research were extremely useful as we established a framework of recommendations for creating an online support group platform in China.

4.1 U.S. Survey Analysis

The Xin Foundation expressed interest in how support groups in the U.S. function. In order to develop a broad understanding, our team created and distributed a survey centering on the benefits and concerns associated with participating in these groups. This survey was posted on Facebook and within various online support group communities, including several Facebook Groups. Additionally, it was sent to interested facilitators and to WPI clubs. Automated web scraping assisted the process of contacting clubs and NAMI facilitators. We sent out 227 emails to facilitators and 202 emails to club leaders. In all, we received 135 responses from individuals and received upwards of 120 responses per each non-demographic question. This discrepancy occurred because all questions following demographics were optional and answered at the participant's discretion. This survey was split into three parts: demographics, the support group experience, and participant concerns. Originally, this survey did not include a question inquiring into what support group participants were coming from (such as a WPI club, an online support group, etc.), causing 28 responses to have no official affiliated origin. A full overview of survey demographics and responses can be found in Appendix G.

As seen in the table of demographics, the majority of responses came from WPI's on campus clubs. These groups best fit the category of a social support group (rather than a peer or systematic support group). Because of this, responses were primarily indicative of experiences from groups that typically meet around a common interest and where support is not necessarily the main focus. Regardless of age and what form of support group a participant was in, respondents were majority female. An important trend within demographics to be noted is that respondents from outside of WPI's clubs were older on average, generally over the age of 55, and these groups typically met in-person. It is unknown if this trend is due to sampling bias or if it is indicative of support groups typically being tailored to older audiences.

One portion of the survey polled respondents on their thoughts and experiences about support groups and their perceived benefits. When asked if individuals thought that support groups fostered connections, 96.3% either agreed or strongly agreed. Many individuals, 81.2%, agreed or strongly agreed that support groups are a place to find help. When asked specifically about their well-being, 84% of participants agreed or strongly agreed that support groups have benefited their well-being. From this data, one can conclude that support groups commonly offer several benefits that can help supplement their well-being, especially within the categories of purpose, social life, and community. This observation lines up with the literature we explored in section 2.1. Furthermore, support group members consistently expressed that these groups are a place to find help, to find individuals to connect with, and are a method for finding joy and comfort during one's daily life.

To better explore the most effective strategies for utilizing support group sessions, our survey included questions on what members prefer. 91.6% of respondents either agreed or strongly agreed that they enjoyed listening and or observing. When asked if respondents enjoyed responding to their peers, only 70.2% agreed or strongly agreed. Overwhelmingly, respondents preferred organic discussions rather than a regimented speaking schedule—shown by the 82.2% that agreed or strongly agreed. Our data suggests that support groups are best received by participants when there are organic discussions and when individuals are not forced to speak or respond if they do not want to.

In addition to exploring positive interactions and experiences within support groups, we felt it was also important to analyze any negative experiences that might be associated with them. When asked if support groups had the potential to spread misinformation, 23.3% of respondents either agreed or strongly agreed with another 18.6% feeling neutral. Similarly, 27.2% of respondents agreed or strongly agreed that support groups can become controversial

or inflammatory in nature, with another 32% feeling neutral. When asked about the transparency of administrative decisions and policies, 43.4% of respondents agreed or strongly agreed that groups need to improve transparency, with another 34.1% of individuals feeling neutral. Although these individuals are not the majority, it is still important to acknowledge concerns posed by existing models. In future sections, we will discuss strategies that could help alleviate and avoid these negative feelings.

This survey provided valuable insight into how support groups are run, how they help, and how they can possibly be improved. In a later section, we will discuss how this information can help guide the development of recommendations for the Xin Foundation and their upcoming support group platform.

4.2 Color Coding Analysis of Interview Responses

Our team conducted 11 total interviews with members and facilitators of support groups based in the United States. We targeted a wide range of support groups, including larger groups such as NAMI and Alcoholics Anonymous, and smaller local groups like South Shore Peer Recovery based in Scituate, Massachusetts. Additionally, we reached out to online groups which can operate internationally, like I Am Adoptee. Many respondents have been involved in more than one support group. Automated web scraping assisted the process of gathering contact information for 227 NAMI leaders. Of these, we received 10 respondents that were interested in participating in our broader study, and 3 that completed interviews with our team members.

To identify valuable information for our sponsor, The Xin Foundation, our team created 6 different categories to classify information gathered from interview responses. These categories all relate to support groups as follows: reason(s) for joining, group activities, available resources, positive experiences and learning outcomes, negative experiences, and group rules of operation. Upon completing all interviews, our group compiled each interview's response notes into a single document. To classify the response notes, our team read through this document and highlighted in a unique color any information which fit into one of the 6 aforementioned categories. This information could be single words, phrases, or one or more sentences. It was not uncommon for information to fit into multiple categories, in which case it would be highlighted in each corresponding color and included in each appropriate category.

After color coding, each highlighted section was organized into a spreadsheet to make it easier to spot commonalities. Once in the spreadsheet, duplicate information was consolidated within each category.

4.2.1 Reasons for Joining a Support Group

From the interviews conducted, our analysis found there were 4 distinct reasons for joining a support group:

1. Feeling that they were “the only one dealing with their problem.”
2. Needing guidance for dealing with emotions such as “anger” or “pain.”
3. Intellectual curiosity about the support group’s topic.
4. As an alternative to professional treatment.

Motivations 1 to 3 were common among more than one respondent while motivation 4 was only given by a single respondent. Motivation 3 is also unique from the others because it is unrelated to looking for support.

4.2.2 Common Support Group Activities

Our group kept track of the support group activities mentioned by interviewees. We found a wide variety of specific activities which have been narrowed down to a few main types which were common among multiple respondents:

1. Recreational classes.
2. Relaxation exercises.
3. Group meals.
4. Community outreach.

Recreational classes for subjects like “painting,” “cooking,” or even doing a “simple science project” have been run both on and offline. Relaxation exercises include calming exercises such as yoga, meditation, and walks in nature. Group meals are held as a social activity for members to eat together in a casual setting. Community outreach consisted of different types of fundraising events such as a “walk for recovery” as well as community service involving “picking up trash around a lake.” Some other activities which were only experienced by one respondent were “photo contests,” a “pen pal program,” and a holiday “gift exchange.” The

majority of these activities were all available to our respondents free of charge, and the frequency of these events ranged from weekly to monthly.

4.2.3 Resources Available to Support Group Members

This section examines the resources that our respondents gained access to through their support groups. Three kinds of available resources were recognized during this analysis:

1. Reading material.
2. Educational classes.
3. Online resources.

Reading material encompasses educational pamphlets, flyers, posters, literature and books. Educational classes are different from recreational classes defined in section 4.2.2 because of their focus on educating about support group topics rather than on fun and creative activities. An example of an educational class focus is “training members on dealing with struggling family members.” Examples of online resources are social media groups such as a “Facebook page” for members to communicate with each other and the organization, and virtual meetings often as an alternative for when in-person meetings are not possible.

4.2.4 Positive Experiences and Growth Outcomes from Support Group Attendance

Four common, positive experiences and learning outcomes from support groups were expressed by our interviewees.

1. A realization that they are not the only one struggling.
2. Empowerment to deal with personal situations after listening to other members share their situations.
3. Feeling a sense of relief after speaking with the group.
4. Finding a group to fit into and feeling a sense of community.

The first point was the most common positive outcome and was shared by nearly all respondents. The second outcome was explained by some respondents that hearing how another member's situation was worse than their own made them feel better. Others shared that hearing other members doing better provided hope that they could also improve their situation. The fourth point was also a very common growth outcome. One respondent described the

significance of the support from the group, stating when unsure what to do they will ask themselves, “what would the group tell me to do?”

4.2.5 Negative Experiences from Support Group Attendance

Because some negative experiences reported by the respondents were specific to online or in-person style support groups, our results for this section were separated into three groups: specific to online support groups, specific to in-person support groups, and applicable to both online and in-person support groups.

There were 2 common negative experiences specific to online support groups:

1. Controversial posts were handled poorly by moderators.
2. Misinformation was widespread and monitoring fact-checking was rare.

Both of these bad experiences appear to be the result of insufficient moderation. One respondent explained that moderation “can prove difficult online because members cannot be online twenty-four seven.”

Two negative experiences were specific to in-person support groups:

1. Some members take up too much time when speaking.
2. Some members interrupt others who are speaking.

Four negative experiences were applicable to both online and in-person support groups:

1. Subject matter becoming too heavy.
2. Discussion going off topic.
3. Joining a new group full of strangers and sharing personal experiences is scary.
4. Differences of opinion between members can lead to conflict.

The fourth point which applies to online and in-person groups was particularly specific to generational differences among older and younger members. But it was elaborated that other differences in thinking, especially in regards to sensitive topics, lead to similar issues.

4.2.6 Support Group Rules of Operation

This section details key organizational rules and policies mentioned by interviewees. Some rules and policies are specific to either online or in-person environments while others are

suitable for both. One interview respondent also shared a document of their organization's rules. This document was not included in our interview analysis, but is listed in Appendix H. Three of the most common rules for in-person meetings were as follows:

1. Raise your hand to signal you want to speak.
2. Do not interrupt while someone else is speaking.
3. You may not talk about members who are not present.

The first two rules are intended to help ensure each member has the opportunity to speak. Regulating and protecting speaking time is important because time constraints are usually limiting. The third rule serves to protect members' privacy and prevent harmful gossip.

Two common rules were identified which are specific to online platforms centered around discussion boards and forums:

1. Monitor and/or remove controversial posts.
2. Suspend member privileges for violating user policy.

These two rules were very common among all the online support group platforms, but differed in how they were enforced depending on the organization's policies. A real example of member privileges being suspended was provided by one respondent. A user was prevented from posting anything to the platform for one week after violating discrimination policy.

Of the rules which work both in online and in-person settings, two stood out as the most frequent:

1. Anything said in the group will not be shared outside of the group.
2. Provide constant policy reminders.

The first of these two rules is designed to protect members' privacy. The second is to help members respect and follow group policy.

4.3 Sentiment Regarding Support Groups in China

In order to discover how support groups fit into Chinese culture and where they are most needed, we collaborated with students from Hangzhou Dianzi University (HDU) to create and

distribute surveys. Results from this survey can be found in Appendix I. Additionally, our HDU counterparts examined several United States support group platforms and provided our team with a summary of their observations.

4.3.1 China Support Group Survey

For convenience, our surveys were primarily sent to the HDU community of undergraduates. In total, we received 140 responses. Of these, 93% were in the 18-24 age-range. Roughly half of respondents (51%) identified as male and half identified as female (49%). When asked to select their relationship status from “single, married, or divorced,” an overwhelming majority of participants (91%) stated that they were single. Finally, when asked about their employment status, 79% of respondents indicated that they were students. As such, 79% indicated that they made less than 20,000 ¥ per year, and a little over half (52%) stated that they live with family. Because our survey population is a homogenous group of college students, conclusions from this survey may not be generalizable.

Following our demographic questions, we asked nine even-scale questions. These questions evaluated each participant’s well-being and the frequency that they engage in social situations similar to those encountered in a support group setting. With regards to well-being, our results are somewhat misaligned: a majority of respondents (64%) indicated that they frequently (“usually” or “regularly”) feel happy, but 74% expressed that they are frequently self-conscious. Additionally, 40% indicated that they are frequently stressed. These rates of self-consciousness and stress do not align with such a high rate of happiness. We expect that this discrepancy is caused by the aforementioned Chinese sociological concept of “face” whereby participants may self identify as “happy” to preserve outward appearances (Yang et al., 2020). After examining the need for support groups, we determined which social elements of support groups our survey population would be most responsive to. We found that a majority of participants frequently spend time with their friends (56%) and frequently offer to help others (68%). This relationship is not necessarily reciprocal: 66% of respondents said that they infrequently (“rarely” or “sometimes”) ask others for help. Again, this is likely caused by the concept of “face,” as asking for help may be seen as admission of some personal failing. Finally, we considered the time commitments of our subject population and their use of WeChat: one platform where the Xin Foundation’s support group application may be developed. We found that 48% of participants frequently had free time, and that the vast majority (81%) frequently

used WeChat. This high usage rate indicates that WeChat would be an accessible platform for a support group application.

After our even-scale questions, we hoped to uncover common stressors for our survey population, who they turn to when in need, and whether or not they are comfortable expressing themselves in a group setting. The most common stressors for our population were (in order of significance): academics, relationships, and work. Other stresses identified by participants included social pressure, health, money, and family. While family can cause stress, many participants (35%) identified family as a resource for alleviating depressive thoughts. Friends provide similar support: 81% of participants stated that they would reach out to friends if they were feeling depressed and 17% said that they would talk to online friends. In addressing the appeal of support groups, an overwhelming majority of respondents (82%) indicated that they would feel comfortable in interest groups which “get together to discuss one thing.” Emotionally-oriented groups may not have the same appeal as interest groups. 54% of respondents indicated that they do not like to share their stress or joy with other people. Contrary to this, 78% of participants said that they would share their frustrations and sadness with people who have the same troubles. The primary difference between these similar questions is the prevalence of people with the same experience. Here, the performance benefit of incorporating peers is substantial and should not be overlooked. Finally, to further reinforce the importance of online functionality, 58% of applicants preferred to “share stories” with like-minded people that they have not met via online platforms instead of in person.

4.4 Feature Analysis of Online Support Group Platforms

As mentioned in a previous section, our research team used an expanded form of O’Riordan’s affordance analysis framework (visualized in Figure 1) to categorize the features provided by each of our 9 chosen OSG platforms. With this framework, platform features fell into three distinct affordance categories: social, content, and functional. Social affordances represented features that allowed users to build an online identity, connect and interact with other users, and moderate who they interact with. Content affordances represented features that dictated how users discover new content, share existing content, and moderate what content they want to see. In the context of an OSG platform, content was reflected by groups,

events, and forum posts. Lastly, functional affordances represented features that extended beyond socialization and content, giving users the ability to find instructional resources and interact with independent activities.

Our analysis using this framework gave us insight into the types of features that are prevalent in an OSG platform and how they work together to form a social network. This insight led us to divide the nine platforms into two fundamental types: discovery and participatory. Three of the 9 platforms were discovery platforms, while the other 6 were participatory. The discovery platforms provided ways for people to discover and connect with support groups that were otherwise conducted outside of the platform, while the participatory platforms provided online support groups that could be directly joined and interacted with through the platform itself. This distinction was made when our team noticed that a subset of the OSG platforms lacked most common social affordances and thus, behaved fundamentally different from the other platforms. The distinction between these two types was found to be important in understanding the relative prevalence of online support group features (see Appendix J for prevalence data).

4.4.1 Social Affordances of OSG Platforms

Each type of platform provided a very similar set of social affordances, respectively. While the discovery platforms focused mainly on users creating and joining events, participatory platforms gave a more comprehensive suite of features, allowing users to create profiles, interact with each other one-on-one, and interact in a group using online forums. Figure 2 shows the prevalence of user-oriented social affordances (features focusing on private user interaction) while Figure 3 shows the prevalence of group-oriented social affordances (features focusing on group interactions).

As shown in Figure 2, the majority of participatory platforms allowed users to create a profile, view each other's forum activity, friend or follow each other, and instant message one another. Half of the platforms also allowed users to post blogs to their profile and report or block users they did not approve of. On the whole, discovery platforms lacked these types of user-oriented features. Although in one instance, a discovery platform let users create a generic profile and instant message one another; this was likely to allow users to contact event coordinators.

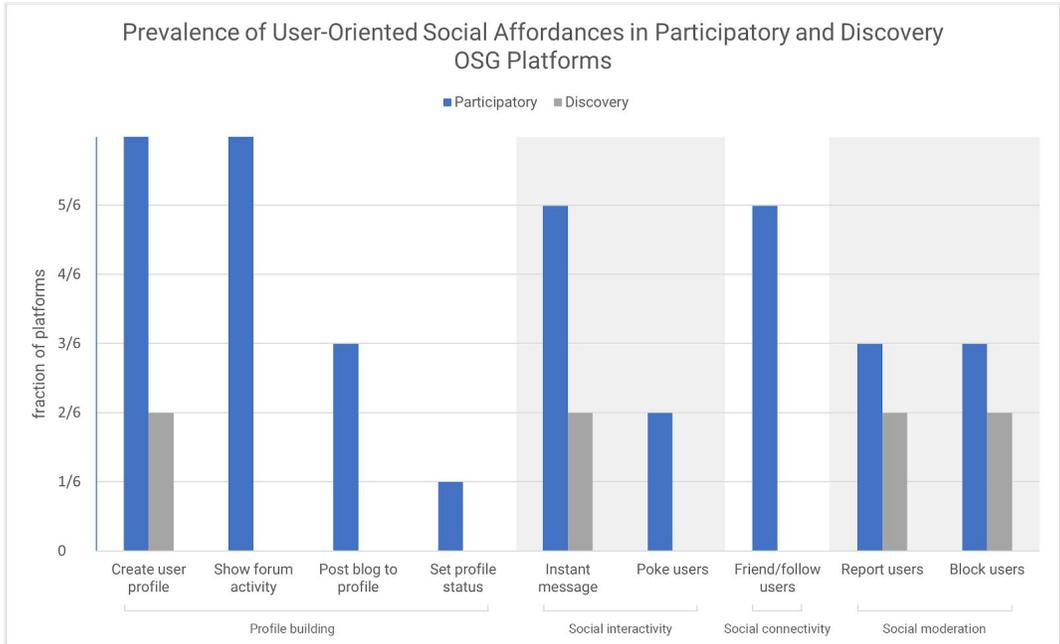


Figure 2. Prevalence of user-oriented social affordances in online support group platforms.

As shown in Figure 3, there was no crossover between group-oriented features offered by participatory platforms with those offered by discovery platforms. The majority of participatory platforms allowed users to interact in an online forum (create posts, reply to posts, etc.) and react to each other with emoticons. In singular instances, features such as group polls and group chats were offered to extend the functionality of online forums. In most cases, groups were predefined and users could not create new ones. Instead of using online groups, the discovery platforms provided a way for users to create external events and usually allowed users to register for them directly through the site.

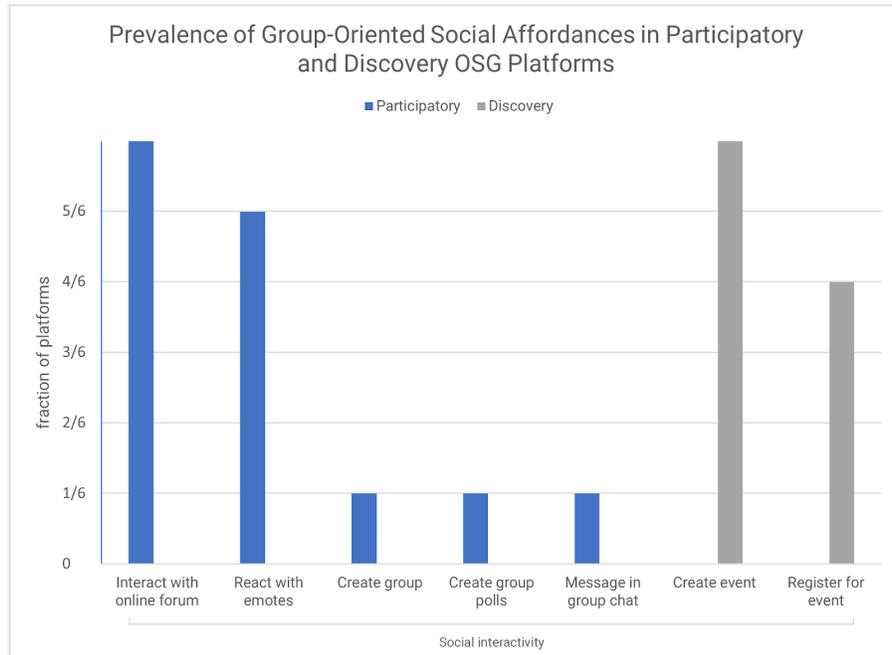


Figure 3. Prevalence of group-oriented social affordances in online support group platforms.

4.4.2 Content Affordances of OSG Platforms

Unlike social affordances, the content affordances found in the OSG platforms had considerable overlap; this is shown in Figure 4. For content discovery (how users discovered new groups, events, and forum posts), all participatory and discovery platforms implemented content lists that users could browse. Occasionally, searching mechanisms were also implemented to allow users to search for specific content. In one instance, a group discovery form was implemented that would suggest recommended content based on user interests and background information. For content aggregation (how multiple sources of content were compiled for the user), participatory platforms had more mechanisms than discovery platforms. All participatory platforms allowed users to join or follow support groups and half of the platforms curated a central feed with forum posts from all affiliated support groups. One discovery platform implemented similar functionality by allowing users to favorite different types of events and then view a list of all their favorite event types. For content moderation, both participatory and discovery platforms sometimes offered the ability for users to report and block content they disapproved of. In some instances, designated moderators or administrators were available to actively moderate offensive content. For content sharing, no explicit features were found in either type of platform.

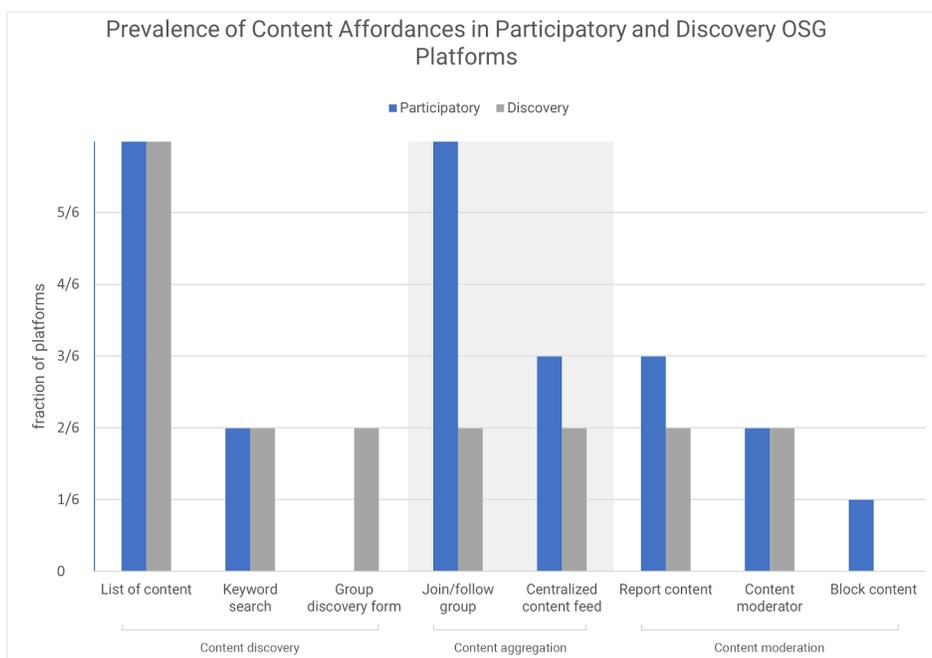


Figure 4. Prevalence of content affordances in online support group platforms.

Type of list structures provided for content discovery varied highly between each platform. Because of this, we documented what types of content lists were used and recorded how often they were utilized. These list types included alphabetical, categorized, dynamically-compiled (trending, popular, recommended, etc.), chronological, and geographical. As seen in Figure 5, alphabetical lists were most common while the other list types were used more sparingly.

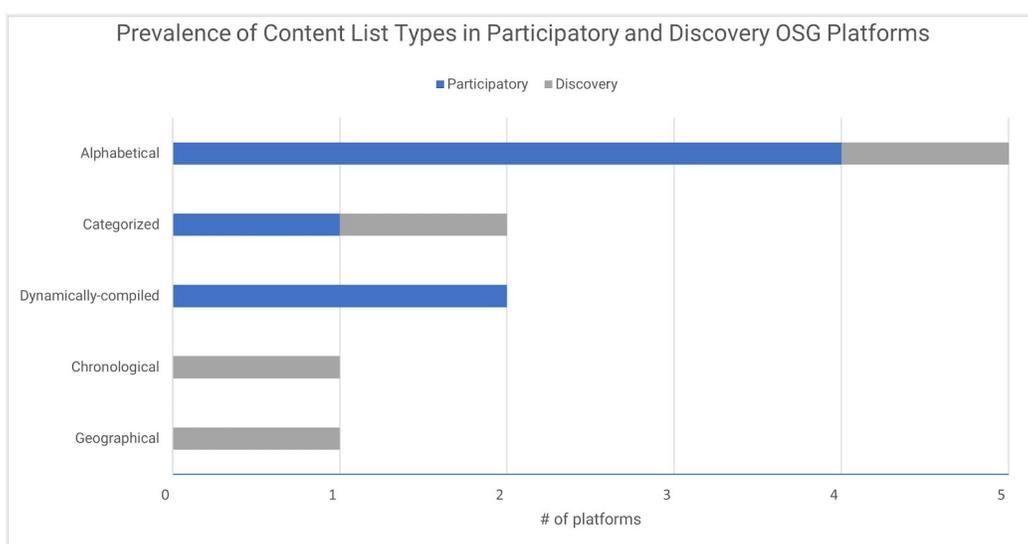


Figure 5. Prevalence of content list types in online support group platforms.

4.4.3 Functional Affordances of OSG Platforms

No correlation was found between functional affordances and OSG platform type. Figure 6 shows the raw number of occurrences of each feature amongst all platforms. Resource features included a Frequently Asked Questions (FAQ) section, crisis resources, how-to tutorials, and moderator training. Private interactive features included private journals, mood tracking, and a well-being assessment.

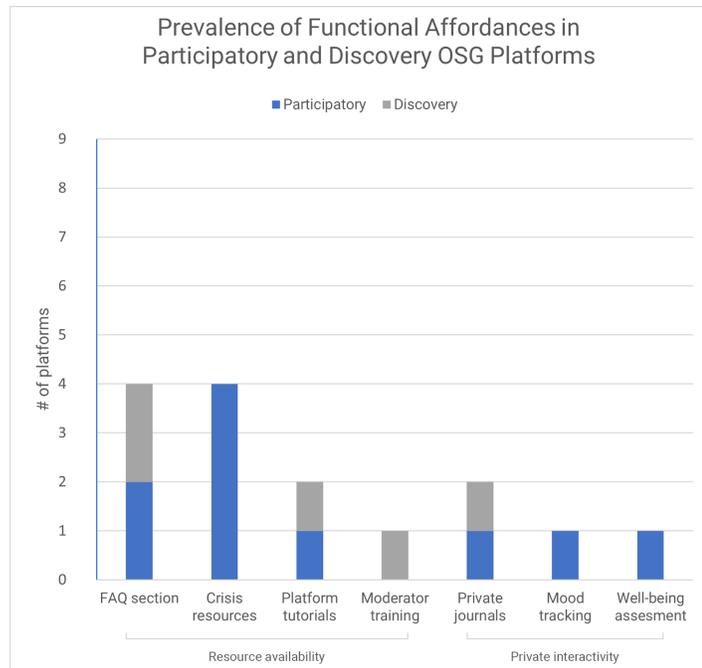


Figure 6. Prevalence of functional affordances in online support group platforms.

4.5 Behavioral Analysis of Online Support Group Users

To analyze common behaviors amongst support group forums, we collected user posts from six different group topics on three different platforms. Over the course of three days, 111 posts were collected from *Daily Strength*, *Health Unlocked*, and *SupportGroups.com*. Targeted topics included anxiety, depression, college stress, fitness goals, weight loss, and financial problems. Posts were pulled directly from the first page of forums and an effort was made to avoid collecting too many posts from the same member and posts from administrators. Table 1

shows how many posts were collected from each forum topic and from how many different platforms (some topics were not available on some platforms).

Support Group Topic	Number of Posts	Number of Platforms
Anxiety	31	3
Depression	19	3
College Stress	14	1
Fitness Goals / Weight Loss	22	2
Financial Problems	25	2

Table 1. Statistics on posts collected from online support group forums.

Using color coding analysis, our research team was able to find common themes throughout all of the OSG posts we collected. Looking at each post individually, we highlighted every part of text that could be categorized into a particular type of content. By the end of our analysis, we had ascertained six major types of post content that suggested common behaviors among OSG users. These content categories are defined in Table 2.

	Content Type	Content Description
1	Physical/mental health state	Expression of one’s current mental or physical health state through direct admission or contextual content, often associated with how the user “feels”
2	Current situation	Expression of one’s current situation as it pertains to the group topic, often influencing their physical/mental health state
3	Positive remarks & wisdom	Explicit expression of positivity or gratitude towards other members and general wisdom provided without invocation
4	Asking for help/advice	Request for help, advice, resources, or feedback on a situation or condition, sometimes expressed contextually
5	Conversation starter	Solicitation of a discussion through conversational inquiry, not pertaining towards direct help/advice
6	Past story	Expression of a past story of oneself or someone else, often to give background on one’s situation or condition

Table 2. Types of post content studied in online support group forums.

It is important to note that the trends found in user behavior that are discussed in the following section are limited in their statistical significance due to our research design. User

posts were collected over a small period of time, from a small number of platforms, and from a small range of support group topics. The posts were also only observed and analyzed by a single team member. These limitations in our research design may have had effects on the findings presented by our data (see Appendix K for data).

4.5.1 Trends in User Content on Support Group Forums

From the user posts we collected, our team found significant trends in what users posted about, independent of the forum topic. As shown in Figure 7, the majority of posts contained some quantity of content around the user’s physical/mental health state and current situation. On average, 70% of all user posts contained some form of this content. This prominent inclination of users to post about their current condition was seen as a form of venting. The other four types of content occurred less frequently (16% of the time), but maintained a mostly consistent trend through each forum topic.

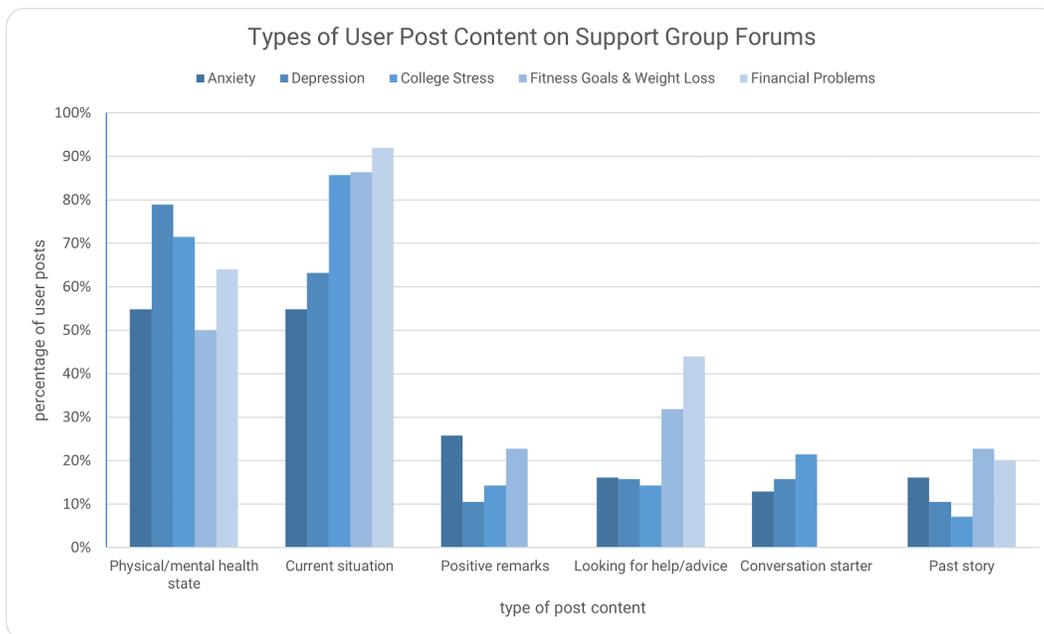


Figure 7. Prevalence of different types of post content in online support group forums.

One particular divergence in trends was an increase in users looking for help/advice in groups centering around self-growth topics such as fitness goals, weight loss, and financial problems. Our team found these differences to be caused by user’s seeking more specific help about their unique situation in order to spur self-improvement.

5. Discussion & Recommendations

In this section, we discuss the findings of our team’s research and provide a series of recommendations for creating new online support group platforms. Our key findings spanned the benefits prevalent in support groups, member concerns, and cultural considerations for bringing support groups to China. After taking these findings into account, we created recommendations that cover the four aspects of OSG platforms we found to be most crucial to preserving the structure of support groups in an online setting. These aspects included how to structure sustainable OSGs, recommended features for them, moderation strategies for their interactions, and important user account features.

5.1 Key Findings for Building Support Groups in China

In order to best inform the Xin Foundation on how to establish meaningful support groups, our team felt it was necessary to develop an in-depth understanding of how these groups benefit individuals, how they may be improved, and how they may need to be adjusted in order to best fit into China’s culture in a stigma-free and productive manner. Our findings from two different surveys and numerous interviews were summarized in these following sections and serve as important reminders about the intentions of support groups and how they may or may not be perceived by Chinese citizens.

5.1.1 Benefits of Support Groups

Through our research, we were able to highlight particularly important benefits for the Xin Foundation to be conscious of and to strive for. These benefits are integral to the support group experience and should be carefully considered.

At their most basic level, support groups exist to develop a sense of community and to connect individuals. Humans are a social species, and the evolution of technology and our ever-changing lifestyles has made it easier for individuals to feel excluded, alone, and or left behind. Individuals have consistently stated that support groups helped them build new connections, develop a sense of community, and feel less alone. These benefits were not only

corroborated in our interviews, but also on a wider scale through our survey. Although individuals can speak with family or friends about their interests or even their struggles, people value being understood and having others empathize with them. This sense of belonging and security helps improve one's sense of social life and community, which in turn, improves their well-being.

Individuals seek out support groups as a means to alleviate stress and to receive guidance. In some cases, support groups can be an important tool to help individuals overcome struggles in certain aspects of their life, such as work, school, or relationships. In this instance, support groups help people navigate difficult times or difficult thought processes. The judgement-free mentality and the honesty associated with support groups offers a safe space for self-expression, as well as a low-pressure environment to allow for genuine interactions. This space allows participants to help one another in varying ways. Having the ability to reach out to others in this manner encourages members to explore their sense of purpose, to evaluate where they are in life, how they got there, and how to proceed in the future. Renewed motivation can contribute to one's well-being, especially within the category of purpose.

In the process of growing together, individuals have the tendency to share resources and to educate themselves and others. This allows individuals to feel an improved sense of power and control in their life and allows them to reclaim their autonomy and self-confidence. Support groups have historically served as a means for dissemination of important resources, be it help-oriented or just interesting articles in relation to the group's topic. This exploration of self-identity and interests better equips them to navigate content surrounding these focuses and in turn, empowers them to take control of their life. This is an important quality for one to learn, and support groups function as a safe environment to develop this confidence.

5.1.2 Concerns for Support Groups

Although support groups typically provide important validation and support, members have addressed some concerns regarding their participation; these concerns represent areas where existing support group models can be improved upon. In the following section, we discuss these growth areas, and explain how we feel the Xin Foundation can best protect vulnerable group members and improve the experience for all who are involved.

Misinformation has been proven to be a common concern within support groups. As individuals are encouraged to share resources and discuss their own experiences, there is a

natural potential for the spread of unreliable or misleading information, which can pose a threat to vulnerable individuals. In groups relating to health (mental, physical, or emotional), this could prove especially problematic and harmful if poor advice or resources are shared.

Support groups exist to unify and uplift, not to alienate or exclude. Despite this, individuals have reported that content within support groups can become controversial or inflammatory in nature. This can be partially attributed to the spread of misinformation, as discussed above, but also to general group behaviors and differing opinions. Peer and social support groups both have the potential to discuss controversial topics and personal opinion may become involved. These discussions can become heated and lead to general discomfort and unrest for group members. Toxicity and controversy are extremely harmful as they pose a threat to a group's sense of safety and security.

On an administrative level, transparency is imperative in the development and maintenance of community trust. Group members want and deserve to understand a group's administrative policies and decisions. Because of this, it is important to clearly communicate a group's expectations and guidelines. If individuals are unsure of a group's rules, as well as the potential disciplinary actions, it can lead to a sense of unease and the decline of a group's sense of security and trust.

5.1.3 Cultural Considerations for Chinese Support Groups

Before making recommendations on creating and implementing online support groups in China, it is necessary to consider China's cultural landscape. There are many cultural differences between China and the United States that may prevent support groups from comfortably occupying the same place in Chinese society as they do in American society. Therefore, support groups will need to be adapted to China's unique culture.

One substantial disparity between China and the U.S. which needs to be addressed is the Chinese idea of "face," which can be described as a combination of social status, reputation, dignity, and public image (Yang et al., 2020). There is not a strong concept of face in the United States, but people still care about their public image and reputation to a lesser extent. Multiple interview participants stated that it was "scary" to talk about your personal struggles to a group of strangers. This fear of being judged after sharing your emotions is common among many people, and is a hurdle many must overcome to join a support group. In China, trying to preserve face may contribute to apprehension towards joining support groups, especially when sensitive

or embarrassing subjects are the focus. When asked about liking to share stress or joy with other people, 54% of our Chinese survey respondents indicated that they do not. However, 78% of participants said that they would share their frustrations and sadness with people who have the same troubles. These misaligned results indicate that emphasizing that support groups are places for people with similar struggles to help each other could have a considerable impact on their success in China.

Our survey results indicated that only 46% of respondents would share feelings of stress or joy with others. This is worrying for the potential success of support groups in China. One method of reducing such apprehension is to increase anonymity among members. It is hard to maintain complete anonymity within in-person support groups because members will naturally be able to see each other face-to-face. Although, in-person groups often make an effort to preserve members' privacy by establishing a rule that whatever is said in the support group will not be shared outside of it—nearly every participant our team interviewed mentioned this type of rule. It is easier to maintain member privacy in online groups because identifying information such as names and appearance can be hidden. This led our team to favor online support groups over in-person ones in the context of China. The data also supports that online groups may be received more favorably in China by younger age groups. When asked which method was preferred for sharing stories with a group of like-minded people who have never met, 58% of respondents chose online while 42% chose offline. It is important to note however that 93% of respondents ranged from 18 to 24 years old. More research is required to determine if the same trend holds for older age groups as well. For reasons of anonymity, as well as accessibility, our team believes that online support groups are more viable than in-person ones in China.

Another cultural difference between the United States and China is the distinction between an individualist and a collectivist society. China is considered a collectivist society, meaning people are more likely to prioritize the needs of the collective over those of the individual. In collectivist societies, deviating from social norms to pursue personal improvement is tolerated less than in individualist societies (Papadopoulos et al., 2013). One consequence of this is that it is often considered less acceptable to ask others for help for personal reasons. Of the people surveyed in China, our team found that about 34% of people commonly ask others for help while 68% of people commonly offer help to others. This reflects the collectivist nature of China's society. Asking for help can be viewed as selfish and self-serving, whereas offering help aligns with prioritizing collective success. Therefore, our group believes it will be essential to market support groups as a place to offer support, rather than just a place to receive it.

Family relationships are another very important facet of Chinese culture, as “maintaining harmony in the family is highly valued in Chinese society” (Ran et al., 2005, p. 27). Family members in China are often very involved with providing help and support to one another, but this can be burdensome and make them the target of “affiliate stigma.” Similar difficulties are present in the United States where many support groups exist for family members of struggling individuals. These groups are focused on helping family members deal with the difficult situation provoked by having a loved one struggle with emotional well-being. Because of the strong family structures in China, our team believes it will be essential for support groups in China to cater to family members of struggling individuals.

5.2 Recommendations for New Online Support Group Platforms

To give concrete means for how the Xin Foundation can expand upon existing designs of online support group platforms, our team created a set of recommendations for how new OSG platforms should be developed. Our recommendations all stem from aspects we felt were important in maintaining the fundamental ideals of support groups in an online environment. Each recommendation represents a culmination of perspectives found from reviewing current literature and conducting our own surveys, interviews, and analyses. To help visualize what an implementation of our recommendations would look like, we created a collection of user interface mockups for a proposed OSG platform (see Appendices L, M, N, O, and P). This proposed platform was specifically designed to serve peer support groups and social support groups, two types of groups that we predict to thrive best in China based on our research.

5.2.1 Structure of Sustainable Online Support Groups

As noted in our literature review, maintaining activity and fostering long-term sustainability can be a difficult task for new online support groups. A significant part of an OSG’s utility is the repository of past interactions that build up over time; these exchanges let new members reap passive support and learn how they can actively participate. Because it takes time to build up this repository, it can be very challenging to kickstart a group’s growth and keep it sustained. In our study of existing OSG platforms, it was not unusual to see groups

that had no activity for multiple years or had only one active member. These are examples of groups that lacked a leading role to stimulate an active and sustainable community.

Because of this, we recommend support groups be only created by approved organizations—organizations that have the resources, the understanding, and the motivation to have their support group succeed. Founding organizations would have the responsibility to foster community growth, promote active participation, and maintain long-term activity. To underpin this structure, the platform would have the obligation to educate organizations on how to properly stimulate new support groups.

In Appendix L, you can see a collection of mockups for a proposed “Resources” page that would serve this function by providing informational resources to both organizations and users. These article-like resources would be divided into “General” and “Admin” such that only approved organizations would have access to administrative resources. General resources mirror the FAQ (Frequently Asked Questions) sections and user tutorials we found extremely valuable in other OSG platforms. These types of resources help give background to what support groups are and help users learn how they can utilize support group features (see Mockup L1). Admin resources would provide help to organizations for creating and operating successful support groups. These resources would include guides on using admin support group features and strategies for growing and maintaining support group communities (see Mockup L2).

To further stimulate support group growth, new OSG platforms should work to make the experience of finding and participating in support groups as easy and enjoyable as possible. To do this, we recommend a “Groups” page that would allow users to find support groups by category and by searching (see Appendix M). The OSG platforms we studied often used alphabetical list structures for viewing support groups, but we found this to be a consequence of outdated design practices. Due to these platforms being operated by non-profit entities, most lacked noticeable commitment to maintaining updated user interfaces that reflect modern design theory. In our opinion, categorized list structures offered a more natural way to find support groups covering a specific topic. Additionally, we found searching mechanisms to be extremely useful in quickly finding common support groups such as those focusing on anxiety and depression. This contemporary structure would make strides in rectifying the dated user interfaces of existing OSG platforms to improve usability.

5.2.2 Features of Support Groups

For individual support group functionality, we recommend three core features: an asynchronous group forum, synchronous group events, and storage for group resources. The first two features were present in either discovery or participatory platforms, but never in both. The merging of both synchronous and asynchronous means of connectivity would open more ways for groups to interact and provide a more flexible support group environment. The third feature was rarely present in the OSG platforms we studied, but would be a step in the right direction for increasing group communality, or the ability to create a communal supply of group resources. In Appendix N, we provide a collection of mockups for what a support group page could look like with these three core features.

On a groups “Forum” section (see Mockup N1), users would be able to post text content with a title that others could reply to with comments or emojis. These forum posts would act like typical forum threads where users could reply to each other’s comments. Available emojis would be chosen by the group administrators to prevent inappropriate emotes. The platform could also provide custom emojis—as seen in many other OSG platforms—to reflect specific emotions such as “stay strong” and “thanks for sharing.” Users would also be able to share posts with other people on the platform to encourage interpersonal connections. The box that enables users to post would have placeholder text that reflects what OSG members most often like to talk about (how they feel and what they are going through); this would implore more users to interact with the forum. Users would be able to search forum posts for specific content that is more relevant to their situation or is something they are interested in. This implementation of post searching would be more simple and functional than search boxes provided by current platforms. The forum page could also provide other systems like group polls and useful information like community guidelines.

The “Events” section of a group (see Mockup N2) would be a chronological list of both past and upcoming events. These events would be created by group administrators and could take many forms. Events could be hosted externally through systems like Zoom or Dingtalk, locally through an in-house, video communication system, or in-person. Users would have the ability to sign up for events, but we recommend it not be a requirement to attend. In support groups, it is acceptable to passively lurk in meetings and leave at any time, so any new OSG platform should encourage this type of inactive participation. On the day of an online event, any member would be able to join through the “Forum” or “Events” pages (see Mockup N3).

The final “Resources” section (see Mockup N4) would act as a place for group’s to collect relevant resources that they accumulate over time. This area would allow group

members to have quick and easy access to a group's tribal knowledge all in one place. Group resources could include pinned forum posts and useful links, as shown in our mockup, or other things like user-created articles.

5.2.3 Moderation of Support Group Interactions

Effective moderation strategies are crucial to the success of OSGs. Moderators help to maintain order and ensure the safety of all group members. Tangibly, this means that they remove inappropriate content and remind users of platform rules. Moderation is especially important in peer and systematic support groups where participants are particularly vulnerable with one another. In this section, we propose several moderation strategies for the Xin Foundation to consider as they develop their OSG platform.

Moderation requires substantial labor investment; trusted individuals must be identified and compensated for their time. To minimize this cost, we propose a system whereby moderators can spend less of their valuable time sifting through benign posts and more time addressing those that are problematic; by implementing functionality for users to report inappropriate or misinformed posts, moderators can limit the scope of their efforts to reviewing only the most reported content. Although, because this review process is not immediate, we recommend giving users the additional ability to hide posts and block other users. These types of features help ensure a safe environment for participants with minimal labor investment and were found in many existing platforms.

Having established a strategy to hide inappropriate content, we now consider rules to define the boundaries of discussion. The following rules are supported by our research:

1. Treat others with the same respect that you would expect from them, even amidst disagreements.
2. Maintain confidentiality at all times. Do not post sensitive personal information.
3. Encourage others to participate: do not make disparaging comments or dominate discussion.
4. Do not post self-promotional materials.
5. Do not discuss or encourage illegal activity.
6. Do not spam or post misinformation.

These rules should be listed in a sidebar on every forum page (see Mockup N1) to maintain maximum transparency and visibility. This will serve as a constant reminder to users as they formulate posts within discussion boards.

In the event that a user breaks policy guidelines, steps must be taken to reprimand them. First and foremost, it is important to acknowledge that those who violate these rules may be the most in need. They should be treated gently and offered the opportunity to redeem themselves. In some instances, it may make sense for moderators to pull problematic users aside to discuss their troubles in a one-on-one chat. Otherwise, temporary forum posting bans will minimize the harm that offending users can cause while ensuring that they can still reap the rewards of hearing from others with the same experience. Duration of posting bans should vary based on the severity of the offense and whether or not they are a repeat offender.

Because this proposed platform can support organizations with a wide variety of facilitation and moderation strategies, we recommend allowing the creation of custom roles. With this system, group administrators could enter a name for a role and toggle their privileges from a predefined list. Roles could then be given to trusted individuals, allowing for a wide range of responsibility delegation hierarchies. Appendix O shows a mockup for a “Roles” page that would provide this function.

Table 3 and Table 4 contain two potential role structures:

Role Name	Privileges
Super Administrator	Modify roles, change rules, modify organization, mute users, remove posts, make posts
Administrator	Change rules, modify organization, mute users, remove posts, make posts
Facilitator	Start synchronous events, mute users, remove posts, make posts
Moderator	Mute users, remove posts, make posts
User	Make posts

Table 3. A standard role layout for a peer or social support group.

Role Name	Privileges
Super Administrator	Modify roles, change rules, modify organization, mute users, remove posts, make posts in all message boards
Administrator	Change rules, modify organization, mute users, remove posts, make posts in all message boards
Moderator	Mute users, remove posts, make posts in all message boards
Non-brain injured Facilitator	Start synchronous events, mute users, remove posts, make posts in all message boards
Survivor Facilitator	Start synchronous events, make posts in discussion message board
Class Instructor	Start synchronous events, make posts in discussion and class resources message boards
User	Make posts in discussion message board

Table 4. A role layout for a Brain Injury Alliance group.

The differences in complexity between Tables 3 and 4 indicates the necessity for custom roles and role editing: the Brain Injury Alliance (BIA) employs both brain-injured facilitators and non-brain-injured facilitators. Naturally, all facilitators should have the ability to start synchronous meetings, but only trained non-brain injured facilitators have the cognition to complete moderation tasks such as post removal. Additionally, the Brain Injury Alliance holds several educational classes, each with their own instructor. This individual must be able to start their own events and post resources in a dedicated “class resources” message board. This example demonstrates the importance of flexibility when supporting a wide variety of support group organizations.

5.2.4 Features of User Accounts

Finally, we now consider user accounts and user interaction. Here, we have two key recommendations: only an anonymous username is required to create an account, but if a user feels comfortable, they have access to a full suite of social networking features. The first of these recommendations is to give users the ability to fully participate in support groups, but also maintain their anonymity and confidentiality while doing so. The minimum requirement of a username was common in many other OSG platforms and represents how online environments can increase the privacy of support groups. The second recommendation serves to maximize

how users can build interpersonal connections that go beyond support groups and minimize any stigma associated with the platform. The closer the platform gets to functioning like a social networking site, the more appealing we think it will be to everyday people.

As such, we compiled a list of common user account features that we thought fit this type of platform best. These features are arranged in no specific order as we think each one has its role in a modern social networking site.

- *User avatar and banner.* Graphical elements like an avatar and banner give user's a high range of flexibility for visual self-expression.
- *User bio.* User biographies provide self introductions that let other members immediately get to know a person.
- *Online status.* Online status gives a sense of real-time presence that many support group platforms often lack.
- *User activity.* User activity shows how a user has been participating in support groups, giving another way of understanding who they are. It also lets friends keep up with how a user is doing.
- *User blog.* User blogs give user's a flexible system for self-expression that is not connected to any support group.
- *Private messaging.* Private messaging between users is a fundamental feature for users to build personal connections between one another.
- *Friending.* Allowing users to friend one another creates a concrete connection between users and would provide a way for users to keep up to date with each other.

To permit as much confidentiality as possible, users would have the option to privatize or ignore as many of these features as they would like. In Appendix P, you can find mockups of what a user profile would look like for both a private and public user (see Mockup P1 and Mockup P2).

A final feature we highly recommend is a comprehensive user feed. This would be a section of user profiles that aggregates forum posts and upcoming events from joined support groups, as well as posts and blogs from friends. Content aggregation like this is a fundamental part of social networking sites; it provides a centralized location for users to consume curated content. Some of the platforms we looked at implemented similar user feeds, but were often clunky and confusing. Our proposed user feed, shown in Mockup P3, would bring together all core platform functionality in a single page.

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Appendix A - Informed Consent Agreement

You have been asked to participate in a student research study. This study is voluntary and doesn't require any action.

Purpose of Study:

This research is being conducted in affiliation with Worcester Polytechnic Institute in fulfillment of the Interactive Qualifying Project. This project is being sponsored by the Xin Foundation, a Chinese NGO with the goal of making people more happy. Our research aims to detail the importance of support groups in the United States, how they function, and how they can be applied in China.

Voluntary Participation:

Participation in this study is voluntary, anonymous, and solely for research purposes. Participation is optional and can be stopped at any time.

Participant Risk:

No physical or psychological risks are posed to participants by taking part in this study.

Participant Confidentiality:

Information gathered from this study will be confidential and handled exclusively by the student research team. Names, titles, and any other identification details will not be collected.

Participant Benefits:

There are no direct benefits from participating in this study. The results and findings of this research may inspire and improve the creation of online mutual support groups in China.

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Appendix B - U.S. Support Group Survey

This research is being conducted in affiliation with Worcester Polytechnic Institute in fulfillment of the Interactive Qualifying Project. This research aims to detail the importance of support groups, how they function, and how they can be improved. Information gathered during this study will be used in a research report to guide the development of an online support group platform in China sponsored by the non-governmental organization, the Xin Foundation. This project and its research methods have been approved by the IRB at WPI.

Consent to Participation

Participation in this study is voluntary, anonymous, and can be stopped at any time. Information gathered from this study will be confidential and handled exclusively by the student research team. Names, titles, and any other identification details will not be collected. Consenting to this survey allows for the use of your response in our public research report. Responses will only be reported in the aggregate form such that no one response is revealed.

1. Do you agree with the terms outlined above?
 - Yes, I consent to participate in this research.
 - No, I do not consent to participate in this research.

Background

These questions ask about your background and other demographics. This information will be used to gather trends in the opinions of participants. You may skip a question at any time, but please try to answer as completely and accurately as possible.

1. What is your age range? **required*
 - Under 18
 - 18 - 24
 - 25 - 34
 - 35 - 44
 - 45 - 54
 - 55 - 64
 - 65+
2. What is your gender?
 - Female
 - Male
 - Other _____
3. What is your highest level of completed education?
 - Some secondary schooling
 - High school/GED

- Some college/university
 - Associate's degree
 - Bachelor's degree
 - Master's degree
 - Doctorate
4. What is your relationship status?
- Single (never married)
 - In a relationship
 - Married
 - Widowed
 - Divorced
 - Separated
5. What is your employment status?
- Full-time
 - Part-time
 - Unemployed and looking for work
 - Unemployed and not looking for work
 - Student
 - Retired
6. How much money do you make in a year?
- Less than \$20,000
 - \$20,000 to \$39,999
 - \$40,000 to \$59,999
 - \$60,000 to \$79,999
 - \$80,000 to \$99,999
 - \$100,000 to \$124,999
 - \$125,000 to \$149,999
 - More than \$150,000
7. What support group are you coming from? **required*
- WPI Club
 - FaceBook Group
 - A group that primarily meets in person but has since moved online
 - A group that exists solely online
 - Reddit
 - Other _____
8. How long have you utilized support groups for?
- Only for a single meeting
 - Less than a month
 - Less than a year
 - Less than three years
 - More than five years

Support Group Experiences and Benefits

These questions ask about your experience as a support group member and what sort of benefits you feel may arise from participation. You may skip a question at any time, but please try to answer as completely and accurately as possible.

All questions in this section were answered on the following 5-point scale:

Strongly disagree 1 2 3 4 5 Strongly agree

1. I think support groups provide a safe space for self-expression.
2. I think support groups help foster connections.
3. I think support groups create strong communities.
4. Support groups help me in my daily life.
5. Support groups have empowered me.
6. Support groups have made me happier.
7. Support groups give me a place to find help.
8. Support groups give me a place to help others.
9. I wish I had joined a support group earlier.
10. I think more people should join support groups.
11. I think anyone can benefit from a support group.
12. Joining a support group has benefited my well-being.
13. Joining a support group has given me a healthy outlet for my emotions.
14. Joining a support group has given me access to a resource(s) that I did not have access to previously.
15. I like to listen and observe in a support group.
16. I like to respond to others in a support group.
17. I don't mind if discussion gets off topic in a support group.
18. I like having my own dedicated time to talk in a support group.
19. I like having organic discussions in a support group.
20. I am open about my involvement in support groups.
21. I hide my involvement in support groups from others.
22. I have formed relationships with other members that extended outside of the support group.

Support Group Concerns

These questions ask about your experience as a support group member and what concerns have arisen as a result. You may skip a question at any time, but please try to answer as completely and accurately as possible.

All questions in this section were answered on the following 5-point scale:

Strongly disagree 1 2 3 4 5 Strongly agree

1. I think support groups can be more harmful than helpful.

2. I think support groups can spread misinformation.
3. I think support groups can get controversial/inflammatory.
4. I think support group members can be inappropriate at times.
5. I think support groups can be toxic at times.
6. I sometimes need to step back from support groups for my own well-being.
7. I think support groups need a strict vetting process for members.
8. I think support groups need improved transparency (e.g. policies and administrative decisions).
9. I am concerned about my anonymity in support groups.
10. I have felt uncomfortable with content discussed in support groups.
11. I have felt uncomfortable because of the actions of another support group member.
12. I have felt uncomfortable because of the actions of a support group administrator.
13. I have felt excluded/ignored in support groups.

Appendix C - Research Interest Form

Information gathered from this form will be confidential and handled exclusively by the student research team.

1. Name

2. Email **required*

We will use this email only to arrange interviews, participant observation, and distribute surveys

3. What is the name of the support group that you are involved in?

4. What is your role in your support group

Member

Facilitator

Volunteer

Other _____

Appendix D - U.S. Support Group Interview Guidelines

Informed Verbal Consent for Participation

1. Do you mind if I record this interview?

*Interviewer will read **Appendix A - Informed Consent Agreement.***

2. Would you like to participate in our research?

Suggested Member Questions

1. How would you describe your role in your support group?
2. How long have you been involved with your support group?
3. How did you first come across your support group?
4. What inspired you to join a support group?
5. Can you share a little bit about your experience/journey participating in support groups?
6. Is there a community outreach aspect to being a member of your support group?
7. What are some typical activities that occur in your support group?
8. What do you feel are some key takeaways from the support group experience?
9. Why do you feel that support groups are important?
10. How do you feel you have benefitted from participating in a support group, if at all?
11. What are some ground rules that your support group established?
 - a. How are situations typically handled in the instance that these rules are broken?
12. Is there anything you would change about how your support group is run? Or is there anything you wish was done better?
13. Is there anything else you feel is important to share with us about your support group?

Suggested Facilitator Questions

1. What is your role as a facilitator?
2. How did you become a facilitator?
3. Why did you become a facilitator?
4. How does a support group benefit from the presence of a facilitator?

Appendix E - Chinese Support Group Sentiment Survey

This research is being conducted in collaboration with Worcester Polytechnic Institute to complete the "Interactive Qualification Project." This study aims to elaborate on the importance of support groups, their functions and how to improve them. The information collected during the research period will be used in the research report to guide the development of the Chinese online support group platform sponsored by the Xin Foundation, a Chinese NGO.

1. What is your age range? **required*
 - 18 - 24
 - 25 - 34
 - 35 - 44
 - 45 - 54
 - 55 - 64
 - 65+
2. What is your gender?
 - Male
 - Female
3. What is your highest level of completed education?
 - Middle school
 - High school
 - Attending College
 - Bachelor's degree
 - Master's degree
 - Doctorate
4. What is your relationship status?
 - Single
 - Married
 - Divorced
5. What is your employment status?
 - Full time
 - Part time
 - Unemployed / Looking for work
 - Unemployed / Not looking for work
 - Student
 - Retired
6. How much do you make a year?
 - less than 20,000 yuan
 - 20,000 - 40,000 yuan
 - 40,000 - 70,000 yuan
 - 70,000 - 100,000 yuan
 - 100,000 - 130,000 yuan

- 130,000 - 160,000 yuan
 - more than 160,000 yuan
7. Do you live with family?
- Yes
 - No

Questions 8 - 16 were answered on the following 4-point scale:

- Rarely
- Sometimes
- Usually
- Regularly

8. How often do you feel happy?
9. How often do you spend time with family?
10. How often do you have free time?
11. How often do you use WeChat?
12. How often do you feel stressed?
13. How often do you feel self conscious?
14. How often do you spend time with friends?
15. How often do you ask others for help?
16. How often do you offer to help others?
17. When you encounter something that makes you depressed, who are you more willing to talk to?
- Family
 - Friends
 - Online friends
 - Psychologist
18. Do you feel comfortable when people get together to discuss the one thing?
- Yes
 - No
19. Do you like to share your stress or joy with other people? Please explain why.
- _____
- _____
20. What form would you prefer if you shared stories with a group of like minded people who have never met?
- Online
 - Offline
21. If there is something sad and frustrating, would you like to share it with others who have the same troubles as you?
- Yes
 - No
22. What makes you stressed? (for example: study, work, relationships)
- _____
- _____

Appendix F - Chinese Support Group Sentiment Survey (Mandarin Translation)

这项研究正在与伍斯特理工学院合作进行，以完成“交互式资格项目”。这项研究旨在详细阐述支持小组的重要性，支持小组的职能以及如何改进它们。研究期间收集的信息将用于研究报告中，以指导由民间组织心基金慈善基金会赞助的中国在线支持小组平台的开发。

1. 您今年几岁？*必要
 - 十八到二十四
 - 二十五到三十四
 - 三十五到四十四
 - 四十五到五十四
 - 五十五到六十四
 - 六十五岁多
2. 请选择您的性别：
 - 男
 - 女
3. 请选择您的最高水平学历？
 - 中学
 - 高中
 - 念大学
 - 学士学位
 - 硕士
 - 博士
4. 您已婚吗？
 - 已婚
 - 未婚
 - 离婚
5. 您的工作状态是什么？
 - 全职工作
 - 兼职工作
 - 找工作
 - 无业
 - 学生
 - 退休的
6. 您一年赚多少钱？
 - 二万元少
 - 二万元到四万元
 - 四万元到七万元
 - 七万元到十万元
 - 十万元到十三万元

- 十三万元到十六万元
 - 十六元多
7. 你跟家人一起住吗？
- 跟家一起人住
 - 不跟家人一起住

第八个问题倒第十六个问题收集了如下所示的四特点制回答：

- 极少
- 偶尔
- 较多
- 经常

8. 你时常感到快乐？
9. 你与家人相处的时间有多少？
10. 你空闲的时间有多少？
11. 你使用经常使用微信吗？
12. 你时常感到压力或沮丧吗？
13. 何时进行自我感知？
14. 你和朋友相处的时间多吗？
15. 你经常寻求朋友的帮助吗？
16. 你会经常帮助别人吗？

17. 当你遇到令你郁闷的事情时你更愿意向谁倾诉

- 家人
- 朋友
- 网上的网友
- 心理医生

18. 你喜欢人们聚在一起讨论同一件事情的氛围嘛？

- 是
- 否

19. 你喜欢将你的压力或者喜悦同其他人一起分享嘛？请说明理由。

20. 如果和一群志同道合但是素昧谋面(没见过面)的人互相分享故事，您更喜欢怎样的形式？

- 线上
- 线下

21. 如果有伤心沮丧的事情您是否愿意同和您有同样困扰的人进行分享呢？

- 是
- 否

22. 你压力的来源是什么（比如，学业，工作，人际关系）

Appendix G - U.S. Support Group Survey Demographics and Results

Demographic variable	Number of responses	Percentage of responses
Age		
18 - 24	99	73.3%
25 - 34	3	2.2%
35 - 44	2	1.5%
45 - 54	4	3%
55 - 64	14	10.4%
65+	13	9.6%
Gender		
Female	95	70.9%
Male	36	26.9%
Non-binary/genderfluid	3	2.2%
Highest Education Level		
Some secondary schooling	1	0.7%
High school/GED	18	13.4%
Some college/university	68	50.7%
Associate's degree	4	3%
Bachelor's degree	26	19.4%
Master's degree	15	11.2%
Doctorate	2	1.5%
Relationship Status		
Single (never married)	58	43.3%
In a relationship	50	37.3%
Married	22	16.4%
Widowed	2	1.5%
Divorced	2	1.5%
Separated	0	0%

Table continues to the next page.

Employment Status		
Full-time	24	18%
Part-time	19	14.3%
Unemployed and looking for work	4	3%
Unemployed and not looking for work	1	0.8%
Student	75	56.4%
Retired	10	7.5%
Yearly Income		
Less than \$20,000	81	68.1%
\$20,000 to \$39,999	7	5.9%
\$40,000 to \$59,999	8	6.7%
\$60,000 to \$79,999	7	5.9%
\$80,000 to \$99,999	3	2.5%
\$100,000 to \$124,999	7	5.9%
\$125,000 to \$149,999	1	0.8%
More than \$150,000	5	4.2%
Affiliated Support Group		
WPI Club	82	76.6%
Facebook Group	2	1.9%
A group that primarily meets in person but has since moved online	21	19.6%
A group that exists solely online	2	1.9%
Support Group Usage Length		
Only for a single meeting	14	11.1%
Less than a month	7	5.6%
Less than a year	18	14.3%
Less than three years	55	43.7%
More than five years	32	25.4%

Question	Strongly Agree	Disagree	Neutral	Agree	Strongly Agree
I think support groups provide a safe space for self-expression.	0 (0%)	0 (0%)	12 (9%)	47 (35.1%)	75 (56%)
I think support groups help foster connections.	0 (0%)	0 (0%)	5 (3.8%)	36 (27.1%)	92 (69.2%)
I think support groups create strong communities.	0 (0%)	2 (1.5%)	9 (6.7%)	47 (35.1%)	76 (56.7%)
Support groups help me in my daily life.	2 (1.5%)	9 (6.8%)	33 (25%)	37 (28%)	51 (38.5%)
Support groups have empowered me.	3 (2.3%)	4 (3.1%)	27 (20.6%)	46 (35.1%)	51 (38.9%)
Support groups have made me happier.	0 (0%)	3 (2.3%)	26 (19.7%)	44 (33.3%)	59 (44.7%)
Support groups give me a place to find help.	0 (0%)	3 (2.3%)	22 (16.5%)	40 (30.1%)	68 (51.1%)
Support groups give me a place to help others.	0 (0%)	0 (0%)	11 (8.3%)	45 (33.8%)	77 (57.9%)
I wish I had joined a support group earlier.	2 (1.5%)	10 (7.6%)	43 (32.6%)	19 (14.4%)	58 (43.9%)
I think more people should join support groups.	0 (0%)	0 (0%)	25 (18.9%)	34 (25.8%)	73 (55.3%)
I think anyone can benefit from a support group.	0 (0%)	6 (4.5%)	29 (21.8%)	37 (27.8%)	61 (45.9%)
Joining a support group has benefited my well-being.	0 (0%)	3 (2.3%)	18 (13.6%)	39 (29.5%)	72 (54.5%)
Joining a support group has given me a healthy outlet for my emotions.	0 (0%)	9 (6.8%)	25 (18.9%)	47 (35.6%)	51 (38.6%)
Joining a support group has given me access to a resource(s) that I did not have access to previously.	1 (0.8%)	3 (2.3%)	24 (18.3%)	39 (29.8%)	64 (48.9%)
I like to listen and observe in a support group.	0 (0%)	1 (0.8%)	10 (7.6%)	43 (32.8%)	77 (58.8%)
I like to respond to others in a support group.	1 (0.8%)	12 (9.2%)	26 (19.8%)	40 (30.5%)	52 (39.7%)

Table continues to the next page.

I like to share my own experiences in a support group.	1 (0.8%)	12 (9.2%)	28 (21.4%)	43 (32.8%)	47 (35.9%)
I don't mind if discussion gets off topic in a support group.	0 (0%)	9 (6.9%)	27 (20.8%)	52 (40%)	42 (32.3%)
I like having my own dedicated time to talk in a support group.	7 (5.5%)	23 (18%)	42 (32.8%)	36 (28.1%)	20 (15.6%)
I like having organic discussions in a support group.	0 (0%)	3 (2.3%)	20 (15.5%)	40 (31%)	66 (51.2%)
I am open about my involvement in support groups	2 (1.5%)	6 (4.6%)	16 (12.3%)	47 (36.2%)	59 (45.4%)
I hide my involvement in support groups from others.	56 (43.4%)	39 (30.2%)	17 (13.2%)	8 (6.2%)	9 (7%)
I have formed relationships with other members that extend outside of the support group.	6 (4.6%)	12 (9.2%)	22 (16.9%)	48 (36.9%)	42 (32.3%)
I think support groups can be more harmful than helpful.	65 (50.8%)	48 (37.5%)	12 (9.4%)	1 (0.8%)	2 (1.6%)
I think support groups can spread misinformation.	30 (2.3%)	45 (34.9%)	24 (18.6%)	26 (20.2%)	4 (3.1%)
I think support groups can get controversial/inflammatory.	17 (13.6%)	34 (27.2%)	40 (32%)	31 (24.8%)	3 (2.4%)
I think support group members can be inappropriate at times.	11 (8.7%)	43 (34.1%)	27 (21.4%)	42 (33.3%)	3 (2.4%)
I think support groups can be toxic at times.	28 (22%)	30 (23.6%)	35 (27.6%)	30 (23.6%)	4 (3.1%)
I sometimes need to stop back from support groups for my own well-being.	37 (29.4%)	36 (28.6%)	28 (22.2%)	18 (14.3%)	7 (5.6%)
I think support groups need a strict vetting process for members.	36 (28.6%)	38 (30.2%)	40 (31.7%)	11 (8.7%)	1 (0.8%)

Table continues to the next page.

I think support groups need improved transparency (e.g. policies and administrative decisions)	13 (10.1%)	16 (12.4%)	44 (34.1%)	40 (31%)	16 (12.4%)
I am concerned about my anonymity in support groups.	47 (37.3%)	42 (33.3%)	25 (19.8%)	6 (4.8%)	6 (4.8%)
I have felt uncomfortable with content discussed in support groups.	52 (40.9%)	39 (30.7%)	19 (15%)	16 (12.6%)	1 (0.8%)
I have felt uncomfortable because of the actions of another support group member.	41 (32.8%)	36 (28.8%)	25 (20%)	23 (18.4%)	0 (0%)
I have felt uncomfortable because of the actions of a support group administrator.	55 (44.4%)	37 (29.8%)	18 (14.5%)	14 (11.3%)	0 (0%)
I have felt excluded/ignored in support groups.	53 (42.1%)	23 (18.3%)	29 (23%)	16 (12.7%)	5 (4%)

Appendix H - Osher Lifelong Learning Institute Class Ground Rules

Becoming Wise

Delving Into The Mystery And Art of Living

1. We are adult thinkers and learners. We all are wise, at least in some things. We bring a wealth of experience, insight and knowledge to this class. Because we are each unique we have unique wisdom to share. So we are all qualified to be teachers and leaders as well as learners. You are invited to share the leadership of our group by contributing to our discussions, making short reports, and by bringing in resources to share (e.g., newspaper clippings, magazine articles, quotations, DVDs, poems, jokes, photos, etc.).
2. What things contribute to wisdom? That is a key question for our group discussion and for our personal growth. We expand our understanding when we respect and value the insights of others. Therefore, it's essential that we listen carefully to each other--so well, that we're able to accurately paraphrase what the other person has said.
3. We have a clear goal in mind: to delve into the mystery and art of living, not just to become smarter or more knowledgeable, but to become wiser, to live better, more fulfilling lives. The more we enter into this process of discovery learning, the more we will get out of it.
4. We respect each other. Because we must feel safe and secure to grow personally, no one will be forced to share anything or to even speak at all, though we all hope you will. And because everyone's ideas and thoughts are valuable, we don't disparage others' comments or dominate the discussion so as to close down those of us who might be timid about speaking up. We keep confidential what is shared in confidence with our group.
5. My responsibilities: As the group leader, I will reread the materials and prepare a lesson plan for each session. I will email you one page each week with questions and a bit of material to spark our discussion. I will bring additional materials to the group as seems appropriate. I will make some short presentations and facilitate the discussion so that all who want to speak have a chance to do so. I will be open to your suggestions and ideas, but I hope to also ask questions that will challenge us to think further and deeper.
6. Your responsibilities: Participate fully. We each have specific responsibilities to our other group members and to me as the leader. For every class, we expect each other to have read in advance, the assigned pages in our reading book, *Becoming Wise* by Krista Tippett. Likewise, we expect that each of us will have read the one-page email posted weekly and that we will have thought about the discussion questions. Please print the page of discussion questions and bring it with you to each class.
7. Make it a priority. We expect that we will make attending the class sessions a high priority, not only for what we might receive, but also for what we might give. Please

inform me if you know in advance that you will miss a class and I will save any handouts for you.

8. Go deep. The readings are substantial in content and average about 30 pages per week. Invest enough time and thought. Pause as you read; think about it. Apply what you're learning to your own thinking, feeling and decision-making and reap the big dividends.

Keep a journal. Choose a key quote. To make the most of this experience, you are encouraged to keep a private journal for the duration of our 10 classes. Each week, choose one quote from the assigned reading that means the most to you and copy it into your journal, so that by the end of the course, you'll have a compilation of ten important things you want to remember and/or implement in your own life. You might also write to yourself about what you are learning, what you do and don't agree with, what new perspectives you are gaining about being wise, what old ideas you are letting go of, what changes you want to make, and what questions you want to raise.

9. Be an active reader. Survey, question, read, recite, practice and review is a great learning methodology. Read with a purpose in mind: "I want to get something out of this that is going to make a difference for me." Underline or highlight passages in your book that are important to you. Make marginal notes. Argue with the author if you want to, or affirm something that really makes sense to you.
10. Please be on time so the class can get started at 11:00 a.m. We will end at 12:30. Remember to put your parking pass on your car dashboard. **Please wear your nametag at every session** so others can see it. It helps build community. Unfortunately, at [REDACTED] you may not bring coffee, tea, or other beverages into the classroom. Shortly before noon, we will take a brief class break of no more than 10 minutes. Of course, you are welcome to take individual breaks at any time. We will spend a few moments at the beginning of class to take attendance and make announcements related to OLLI. You are encouraged to keep a three-ring notebook or expandable folder for the handouts that you will receive. Most of them will come to you by email.
11. OLLI classes will be cancelled when the Durham Public Schools are closed for reasons of weather. If you are unclear about whether there is a class, you may call the office phone [REDACTED] by 8 a.m. The WARL website (www.wral.com) is a good source about weather closings and delays. My home phone is [REDACTED]
12. Twice during the course I'll ask you to give me an evaluation of our time together. I use your comments to improve my teaching. But, at any time, if there are ways I can make the class more meaningful for you, do not hesitate to let me know. I will do what I can to make this an enjoyable learning experience for us all. Thank you,

Identifying information has been redacted in black.

Appendix I - China Survey Demographics and Results

Demographic variable	Number of responses	Percentage of responses
Age		
18 - 24	130	92.86%
25 - 34	3	2.14%
35 - 44	2	1.43%
45 - 54	3	2.14%
55 - 64	0	0%
65+	2	1.43%
Gender		
Female	69	49.29%
Male	71	50.71%
Highest Education Level		
Middle school	3	2.14%
High school	27	19.29%
Attending college	12	8.57%
Bachelor's degree	93	66.43%
Master's degree	3	2.14%
Doctorate	2	1.43%
Relationship Status		
Married	9	6.43%
Single	128	91.43%
Divorced	3	2.14%
Employment Status		
Full time	19	13.57%
Part time	3	2.14%
Unemployed / Looking for work	2	1.43%
Unemployed / Not looking for work	2	1.43%
Student	111	79.29%
Retired	3	2.14%

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Yearly Income		
< 20,000 ¥	111	79.29%
20,000 - 40,000 ¥	11	7.86%
40,000 - 70,000 ¥	6	4.29%
70,000 - 100,000 ¥	7	5%
100,000 - 130,000 ¥	0	0%
130,000 - 160,000 ¥	1	0.71%
> 160,000 ¥	4	2.86%
Lives with Family		
Yes	73	52.14%
No	67	47.86%

Question	Rarely	Sometimes	Usually	Regularly
How often do you feel happy?	7 (5%)	44 (31.43%)	55 (39.29%)	34 (24.29%)
How often do you spend time with family?	27 (19.29%)	67 (47.86%)	38 (27.14%)	8 (5.71%)
How often do you have free time?	9 (6.43%)	64 (45.71%)	56 (40%)	11 (7.86%)
How often do you use apps like WeChat?	6 (4.29%)	20 (14.29%)	37 (26.43%)	77 (55%)
How often do you feel stressed?	11 (7.86%)	72 (51.43%)	34 (24.29%)	23 (16.43%)
How often do you feel self-conscious?	4 (2.86%)	32 (22.86%)	65 (46.43%)	39 (27.86%)
How often do you spend time with friends?	10 (7.14%)	52 (37.14%)	58 (41.43%)	20 (14.29%)
How often do you ask others for help?	27 (19.29%)	65 (46.43%)	40 (28.57%)	8 (5.71%)
How often do you offer to help others?	4 (2.86%)	41 (29.29%)	71 (50.71%)	24 (17.14%)

Question	Number of responses	Percentage of responses
Do you feel comfortable when people get together to discuss the one thing?		
Yes	115	82.14%
No	25	17.86%
What form would you prefer if you shared stories with a group of like-minded people who have never met?		
Online	81	57.86%
Offline	59	42.14%
If there is something sad and frustrating, would you like to share it with others who have the same troubles as you?		
Yes	109	77.86%
No	31	22.14%

Question 20	Number of responses	Percentage of responses
When you encounter something that makes you depressed, who are you more willing to talk to?		
Family	49	35%
Friend	113	80.71%
Online friend	24	17.14%
Psychologist	9	6.43%
Other	15	10.71%

For Question 20, respondents who marked *Other* answered with the following:
(Similar answers were merged and then translated to English by the HDU team)

- I always dispel negative emotions by myself.
- I keep a diary.
- I share my depression with my girlfriend/boyfriend.

Question 21	Number of responses	Percentage of responses
Do you like to share your stress or joy with other people? Explain why.		
Yes	65	46.43%
No	75	53.47%

For Question 21, respondents who marked Yes explained with the following:
(Similar answers were merged and then translated to English by the HDU team)

- Sharing makes me feel more comfortable, more relieved, and less stressed.
- If I share happiness, I will be released, and others will also feel happy.
- Emotions need to be vented.
- I prefer to share the joy over sadness.
- Sharing interesting things can make friendship, and sharing pressure can increase understanding between friends.
- Personally, I like sharing because sharing makes me happy.
- I can find a better solution by sharing.
- Different answers can be obtained from the perspective of others, and I can broaden my horizons.
- To be honest, it's good to share, but I occasionally worry that I'll disturb others.

Question 22	Number of responses	Percentage of responses
What makes you stressed? (For example: study, work, relationship)		
Study	113	80.71%
Work	67	47.86%
Relationship	85	60.71%
Other	14	10.71%

For Question 22, respondents who marked *Other* answered with the following:
(Similar answers were merged and then translated to English by the HDU team)

- Loving
- Social Pressure
- Health
- Money

Appendix J - Online Support Group Affordance Analysis

Feature name	Feature description	Affordance subtype	Participatory platforms	Discovery platforms
Social Affordances				
Event registration	Event registration allows users to join social gatherings	Social interactivity	0 / 6	2 / 3
Create event	Creating an event allows users to create new social gatherings	Social interactivity	0 / 6	3 / 3
Discussion board (posts and responses)	Discussion boards allow users to share questions, experiences, and other relevant content to a group	Social interactivity	6 / 6	0 / 3
Forum emotes	Emotes allow users to interact abstractly through the use of emoticons	Social interactivity	5 / 6	0 / 3
Group chat	Group chats allow for the synchronous interaction of group members	Social interactivity	1 / 6	0 / 3
Polls	Polls allow groups of people to express their opinion	Social interactivity	1 / 6	0 / 3
User reporting	Reporting users allows users to expression disapproval of purposely negative/inflammatory users	Social moderation	3 / 6	1 / 3
User blocking	Blocking users allows users to block all content from a particular user from their content feed	Social moderation	3 / 6	1 / 3
Friending/ following	Friending allows users to build connections with other users	Social connectivity	5 / 6	0 / 3
User profile (pictures, bio, interests)	User profiles allows users to express their identity to other users	Profile building	6 / 6	1 / 3
User status/ mood/ online status	Users status give live profile updates to other users	Profile building	1 / 6	0 / 3
User activity	User activity allows users to view the content activity of other users	Profile building	6 / 6	0 / 3

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Instant messaging	Instant messaging gives users the ability to directly interact with each other in a private environment	Social interactivity	5 / 6	1 / 3
Poking (hugs, hearts)	Poking allows users to express to a user that they are thinking about them	Profile building	2 / 6	0 / 3
User journals/blogs	User blogs gives users another way to express their identity and update their profile through personal reflections	Profile building	3 / 6	0 / 3
Create group	Creating a group allows for the discovery of more relevant users and a new dedicated content space	Social interactivity	1 / 6	0 / 3
Content Affordances				
Keyword search	A keyword search allows users to find relevant groups, events, posts, or other content that might be available	Content discovery	2 / 6	1 / 3
Categorized list	A categorized list divides content (most often groups) into identifiable categories	Content discovery	1 / 6	1 / 3
Compiled lists (trending, recommended, most popular)	Compiled lists promotes content that would be relevant to the particular user	Content discovery	2 / 6	0 / 3
Chronological list	A chronological list displays content based on time to account for synchronous meetings or events	Content discovery	0 / 6	1 / 3
Alphabetical list	An alphabetical list is the simplest way to display titled content (most often groups)	Content discovery	5 / 6	1 / 3
Location-based list	A location-based list displays content based on geographical proximity to allow users to find local content	Content discovery	0 / 6	1 / 3
Join/ follow/ subscribe to group	Subscribing to a group expands the accessibility of liked content through notifications, centralized feeds, and subscription lists	Content aggregation	6 / 6	1 / 3

Table continues to the next page.

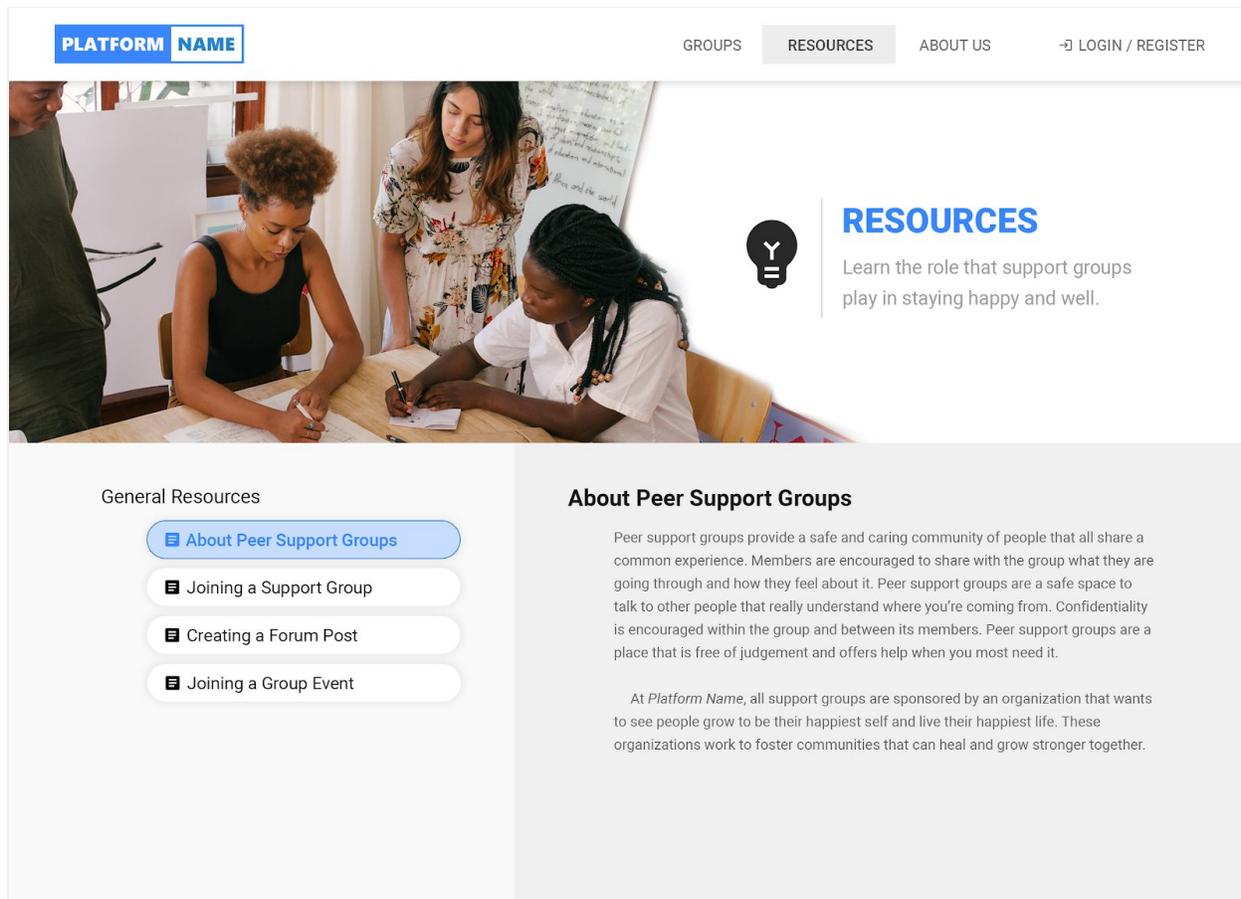
Content reporting	Reporting content allows users to express disapproval of negative/inflammatory content	Content moderation	3 / 6	1 / 3
Content blocking	Blocking content allows users to remove content from their content feed	Content moderation	1 / 6	0 / 3
Group administrators /moderators	Dedicated moderators improves the active moderation of negative/inflammatory content/users	Content moderation	2 / 6	1 / 3
Centralized discussion feed	Centralized discussion feeds aggregate subscribed content for increased accessibility	Content aggregation	3 / 6	1 / 3
Group matching form	Group matching forms and the like allow for users to find more relevant content and users	Content discovery	0 / 6	1 / 3
Functional Affordances				
Private journals	Personal journals users can use to keep tracking of their thoughts and experiences	Private interactivity	1 / 6	1 / 3
FAQ	Frequently asked questions about the platform	Resource availability	2 / 6	2 / 3
Tutorials/learn how the platform works	Educational resources for users to learn the platform	Resource availability	1 / 6	1 / 3
Crisis resources	Crisis resources for dangerous situations and personal emergencies	Resource availability	4 / 6	0 / 3
Personal well-being assessment	An assessment of user well-being so that users can better understand their needs and priorities	Private interactivity	1 / 6	0 / 3
Mood tracking	Ability for users to track their mood to see changes through time	Private interactivity	1 / 6	0 / 3
Host/moderator training	Training for moderators to improve their group moderation	Resource availability	0 / 6	1 / 3

Appendix K - Coding Data from Support Group Forum Analysis

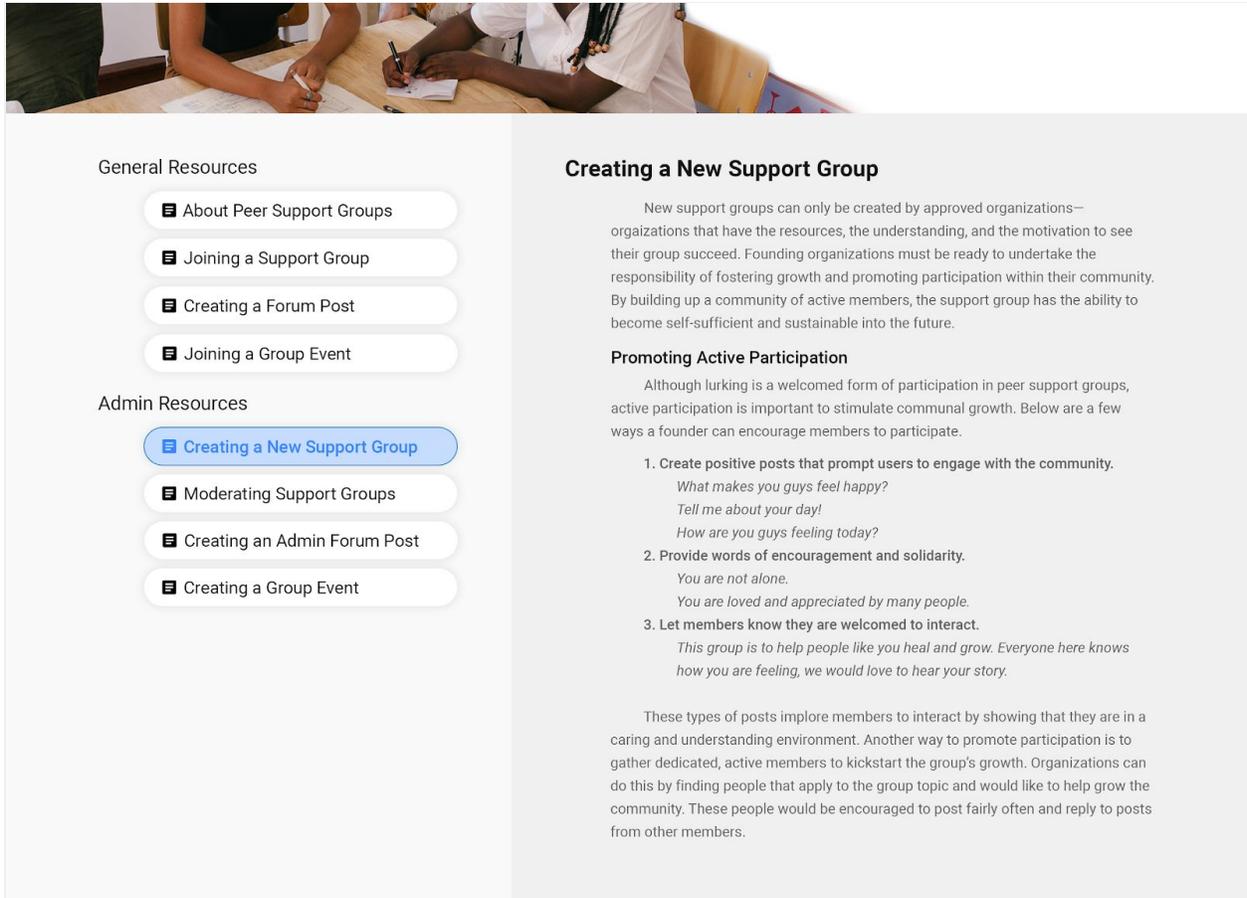
	Anxiety	Depression	College Stress	Fitness Goals/ Weight Loss	Financial Problems
Physical/mental health state	17 (54.8%)	15 (78.9%)	10 (71.4%)	11 (50.0%)	16 (64.0%)
Current situation	17 (54.8%)	12 (63.2%)	12 (85.7%)	19 (86.4%)	23 (92.0%)
Positive remarks & wisdom	8 (25.8%)	2 (10.5%)	2 (14.3%)	5 (22.7%)	0 (0.0%)
Looking for help/advice	5 (16.1%)	3 (15.8%)	2 (14.3%)	7 (31.8%)	11 (44.0%)
Conversation starter	4 (12.9%)	3 (15.8%)	3 (21.4%)	0 (0.0%)	0 (0.0%)
Past story	5 (16.1%)	2 (10.5%)	1 (7.1%)	5 (22.7%)	5 (20.0%)

This table shows the number and percentage of collected forum posts from different online support group topics that included some quantity of coded content.

Appendix L - Online Support Group Platform Mockups (Resources Page)

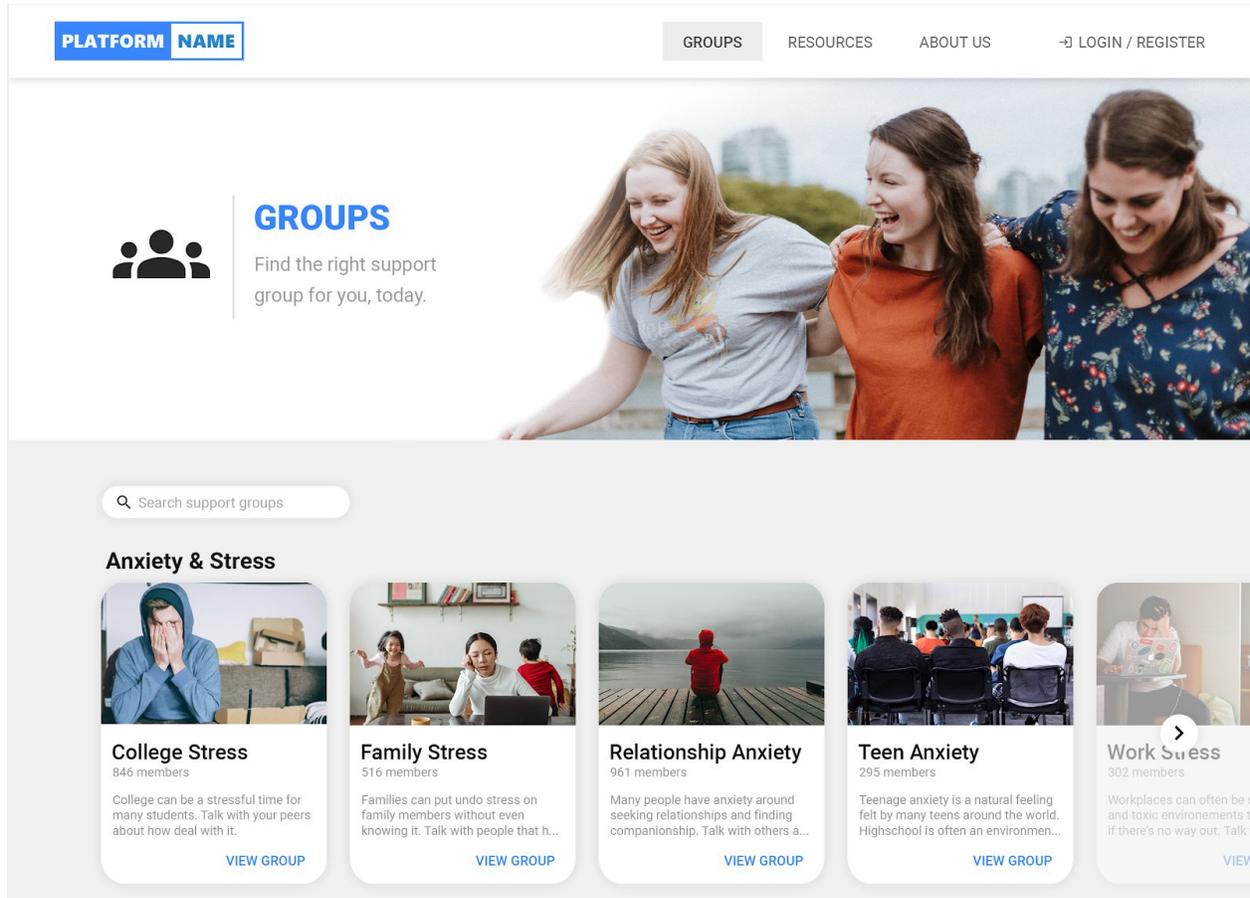


Mockup L1. Online support group platform mockup showing the “Resources” page with the “About Peer Support Groups” resource selected (not signed in).



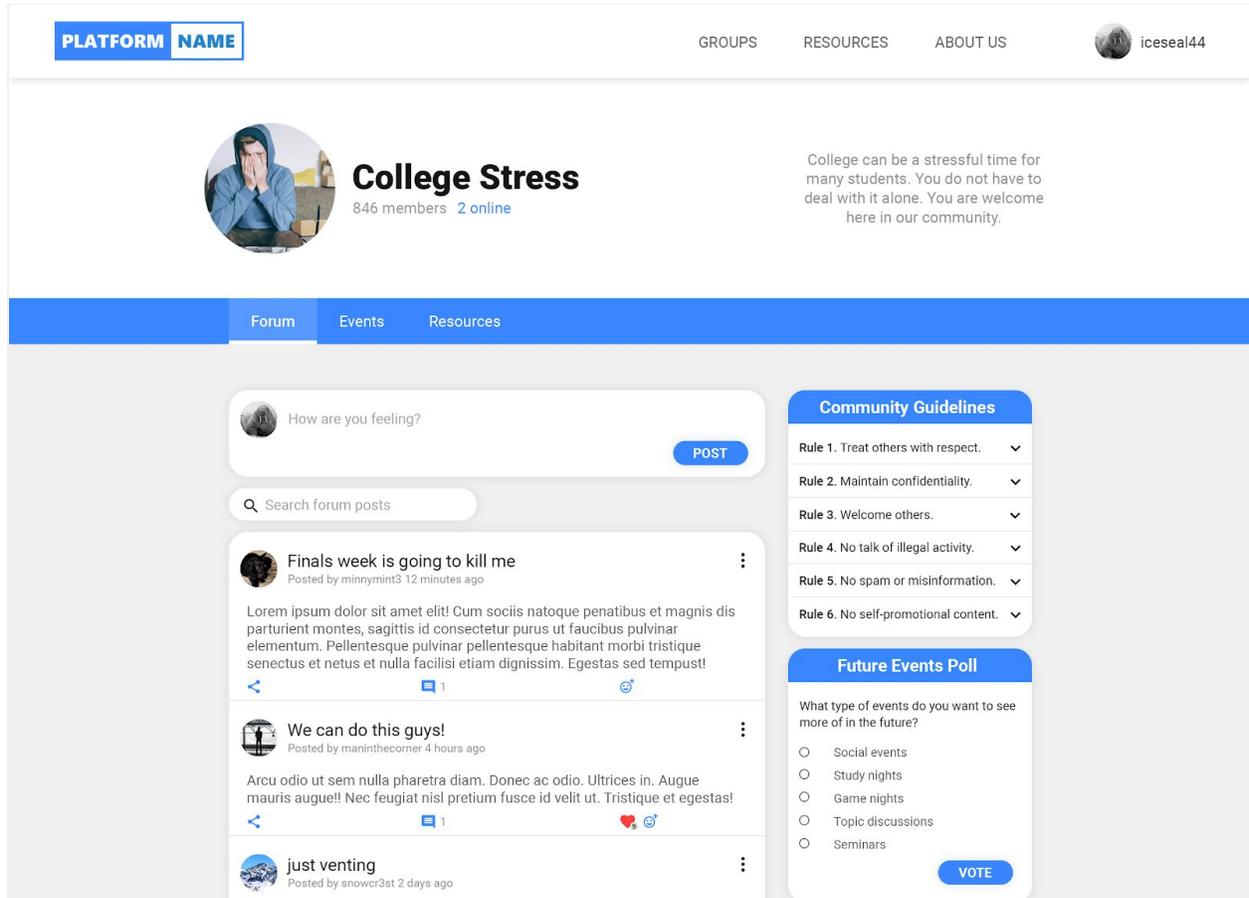
Mockup L2. Online support group platform mockup showing a scrolled view of the “Resources” page with the “Creating a New Support Group” resource selected (signed in as group admin).

Appendix M - Online Support Group Platform Mockups (Groups Page)



Mockup M1. Online support group platform mockup showing the “Groups” page.

Appendix N - Online Support Group Platform Mockups (Support Group Pages)



Mockup N1. Online support group platform mockup showing the “Forum” page of a support group.

PLATFORM NAME
GROUPS RESOURCES ABOUT US
 iceseal44



College Stress

846 members [2 online](#)

College can be a stressful time for many students. You do not have to deal with it alone. You are welcome here in our community.

Forum
Events
Resources

Upcoming Events

DEC
24
8pm

JAN
16
7pm

Group Social
22 attendees

Meeting for anyone interested in talking in person. We'll have breakout rooms setup for different topics of discussion.

[SIGN UP](#)

Game Night
45 attendees

Game night for any members who enjoy games like Cards Against Humanity and Spyfall. Come and have some fun!

[SIGN UP](#)

Past Events

DEC
5
8pm

NOV
12
4pm

OCT
29
8pm

Group Social
31 attendees

Meeting for anyone interested in talking in person. We'll have breakout rooms setup for different topics of discussion.

Study Night
17 attendees

We are hosting a group study night for anyone who wants to work together in a stress-free environment.

Halloween Social
40 attendees

Social meeting for anyone interested in talking in person. We encourage Halloween costumes and have spooky games planned!

Mockup N2. Online support group platform mockup showing the “Events” page of a support group.

PLATFORM NAME GROUPS RESOURCES ABOUT US iceseal44



College Stress

846 members 2 online

College can be a stressful time for many students. You do not have to deal with it alone. You are welcome here in our community.

Forum
Events
Resources

 How are you feeling? POST

🔍 Search forum posts



Finals week is going to kill me

Posted by minnymint3 12 minutes ago

Lorem ipsum dolor sit amet elit! Cum sociis natoque penatibus et magnis dis parturient montes, sagittis id consectetur purus ut faucibus pulvinar elementum. Pellentesque pulvinar pellentesque habitant morbi tristique senectus et netus et nulla facilisi etiam dignissim. Egestas sed tempust!

👤 💬 1 👍

⋮



We can do this guys!

Posted by maninthecorner 4 hours ago

Arcu odio ut sem nulla pharetra diam. Donec ac odio. Ultrices in. Augue mauris augue!! Nec feugiat nisl pretium fusce id velit ut. Tristique et egestas!

👤 💬 1 ❤️ 👍

⋮



just venting

Posted by snowcr3st 2 days ago

⋮

DEC 24
8pm

Group Social

22 attendees 18 joined

Meeting for anyone interested in talking in person. We'll have breakout rooms setup for different topics of discussion.

JOIN

Community Guidelines

- Rule 1. Treat others with respect. ▼
- Rule 2. Maintain confidentiality. ▼
- Rule 3. Welcome others. ▼
- Rule 4. No talk of illegal activity. ▼
- Rule 5. No spam or misinformation. ▼
- Rule 6. No self-promotional content. ▼

Mockup N3. Online support group platform mockup showing the “Forum” page of a support group on the day of a group event.

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Forum
Events
Resources

Pinned Posts



Words of encouragement from Xr. Arith Eclo

Posted by picsalot 8 months ago

⋮

Consequat, nisl vel pretium, lectus quam id leo in vitae odio morbi. Eu facilisis sed odio morbi quis commodo odio aenean. Amet nisl purus in mollis nunc sed id semper. Nec tincidunt praesent? Pretium viverra suspendisse potenti nullam. Est pellentesque elit ullamcorper dignissim, cras tincidunt lobortis feugiat nibh sed. Eget est lorem ipsum dolor sit amet, ultrices eros in cursus turpis massa tincidunt dui, euismod lacinia at quis risus, rhoncus urna neque viverra justo nec ultrices dui. Quis eleifend quam adipiscing vitae proin sagittis nisl rhoncus. Dolor magna eget est lorem ipsum, amet massa vitae, tortor condimentum lacinia quis vel!

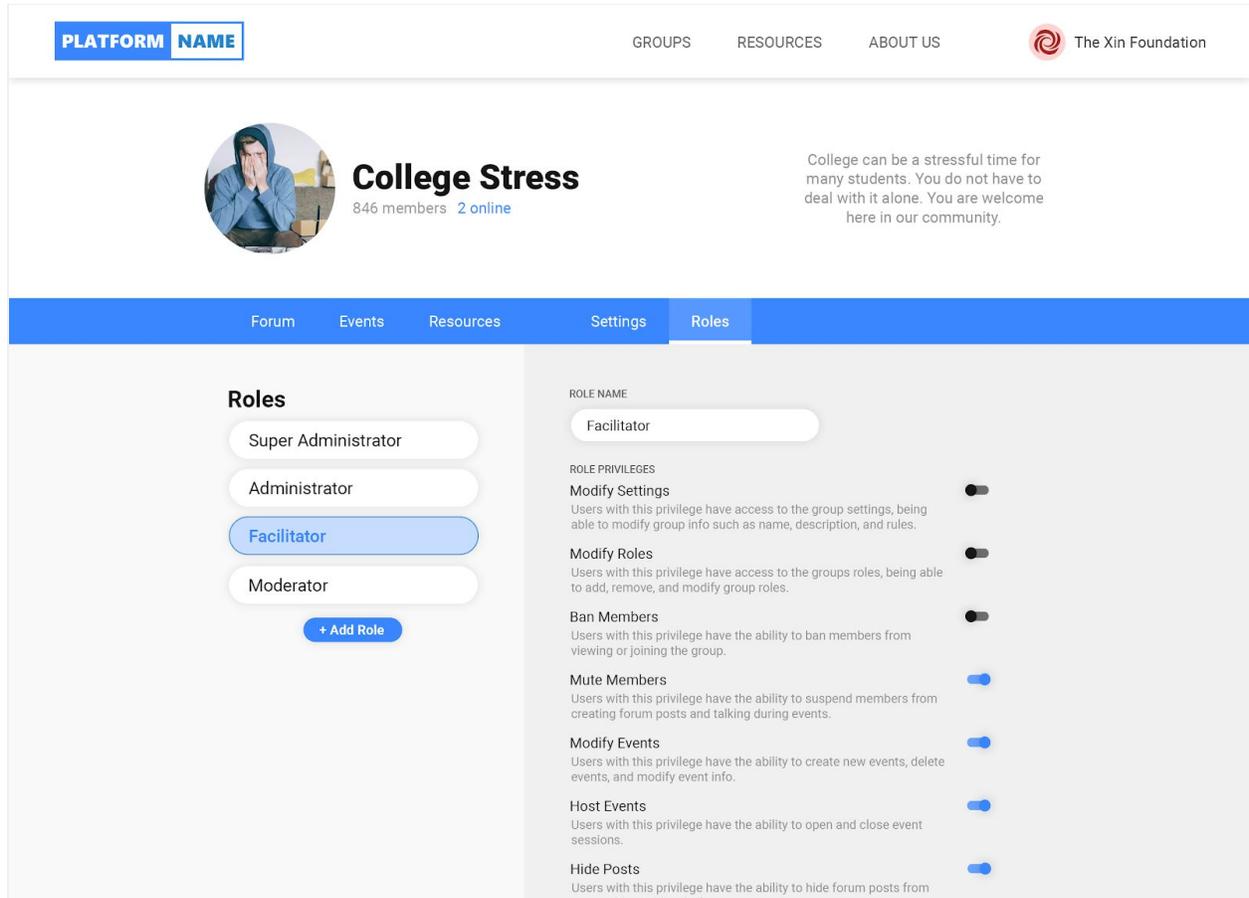
Neque egestas congue quisque egestas 'Porta Nibh' by Xr. Arith Eclo. "Phasellus vestibulum, Nulla porttitor massa id? Ultrices vitae auctor eu augue? Porta lorem mollis aliquam ut porttitor. Ut diam quam nulla porttitor massa id neque egestas integer eget. Aliquet nibh praesent tristique magna sit justo nec ultrices dui sapien, Quisque egestas diam. At tellus at urna condimentum mattis pellentesque id nibh vestibulum morbi blandit cursus risus. Massa sapien faucibus et molestie ac feugiat. Sollicitudin tempor id eu nisl nunc, amet venenatis urna cursus eget nunc scelerisque viverra mauris in. Nisi scelerisque eu ultrices vitae auctor eu augue ut lectus, eleifend, quam adipiscing, vitae proin sagittis Nisl rhoncus mattis. Purus sit amet volutpat. Mi tempus imperdiet nulla malesuada pellentesque, congue quisque egestas diam in arcu cursus euismod quis. Ipsum, dolor sit amet consectetur adipiscing elit pellentesque. Amet justo donec enim diam vulputate ut pharetra sit. Enim sed faucibus turpis in eu mi bibendum neque egestas.

Useful Links

- Student Stress Anxiety Guide
<https://www.learnpsychology.org/student-stres...>
- Mindfulness Exercises
<http://www.livingwell.org.au/mindfulness-exerc...>
- Managing Stress
<https://www.edutopia.org/article/stress-manag...>
- Stress Management Techniques for Students
<https://www.verywellmind.com/top-school-stre...>
- Managing Stress on Campus
<https://campusmindworks.org/help-yourself/se...>
- School Stress Management
<https://counseling.online.wfu.edu/blog/school-...>
- Stress in School
<https://www.accreditedschoolsonline.org/reso...>
- College Student's Guide to Stress Management
<https://www.purdueglobal.edu/blog/student-lif-...>

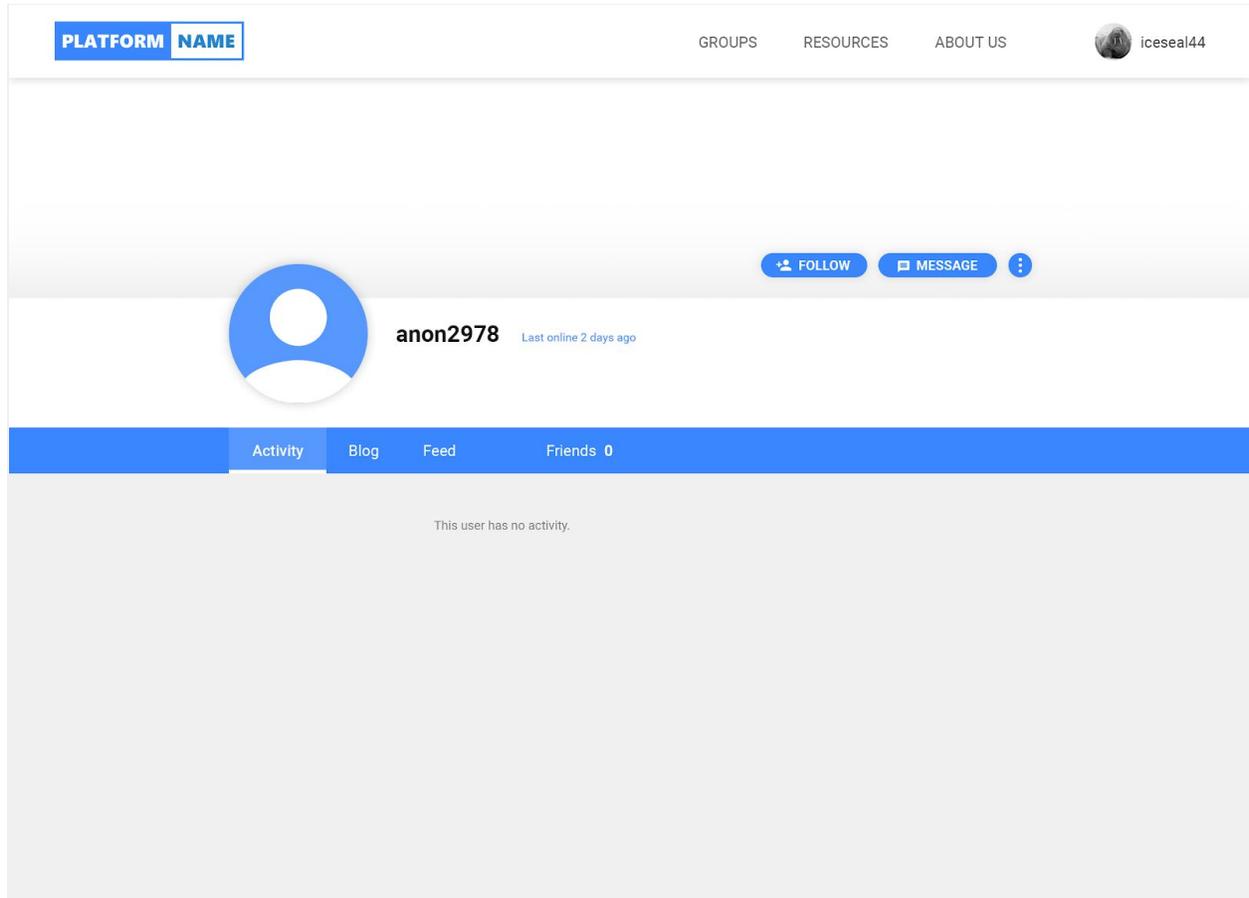
Mockup N4. Online support group platform mockup showing the “Resources” page of a support group.

Appendix O - Online Support Group Platform Mockups (Support Group Admin Pages)

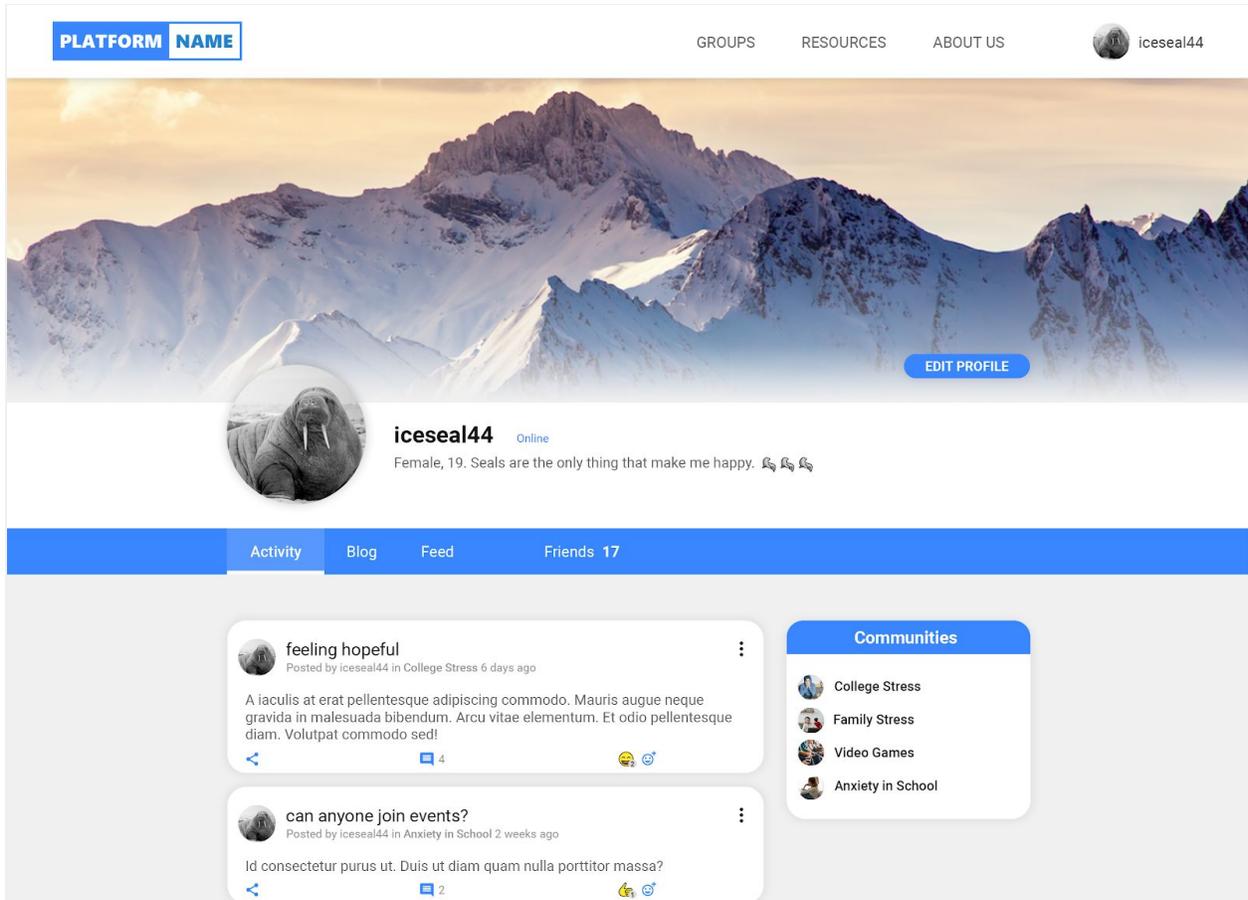


Mockup O1. Online support group platform mockup showing the “Roles” page of a support group (signed in as the group admin).

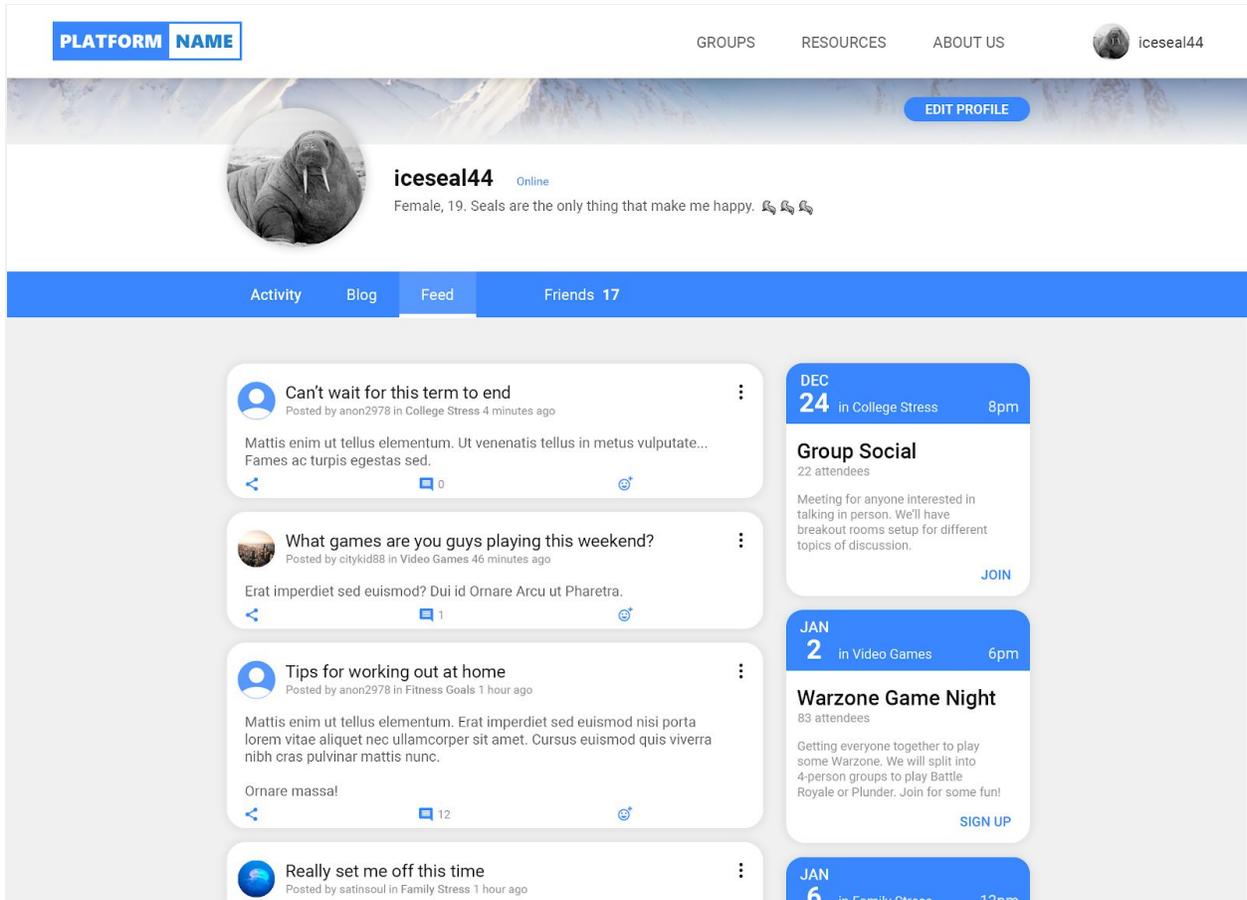
Appendix P - Online Support Group Platform Mockups (User Account Pages)



Mockup P1. Online support group platform mockup showing a user account page with the minimum amount of information (signed in as a different user).



Mockup P2. Online support group platform mockup showing a user account page with full account information (signed in as the user).



Mockup P3. Online support group platform mockup showing a scrolled view of a user account page on the “Feed” section (signed in as the user).