A Descriptive Study of Adolescent Perceptions of Rural Versus Urban Kentucky High School Student Mental Health Challenges

Allison Tu

A Descriptive Study of Adolescent Perceptions of Rural Versus Urban Kentucky High School Student Mental Health Challenges

Allison Tu

Research has evaluated mental health perspectives of adults, but no studies gather Kentucky students' input on these issues. Understanding youth perceptions is critical to creating effective mental health interventions, as students experience these issues firsthand. Capturing rural and urban divides is also crucial to create programming applicable to both student groups. Therefore, this study aimed to characterize the similarities and differences between the student-reported perceptions of mental health challenges facing urban versus rural students. Data was collected through four focus groups at urban and rural high schools. Thematic analysis through ATLAS.ti showed that students perceived that peers, family, lack of resources, and high stress influenced mental health in both urban and rural areas. Differences between urban and rural perceptions revolved around social media, community culture, and overdose. These results serve as a foundation for future research assessing youth perceptions to identify an effective intervention to improve Kentucky students' mental health.

Keywords: Adolescent; mental health; Kentucky; rural; urban; youth perceptions

Introduction

Youth mental health issues in the United States are skyrocketing. For instance, one in five adolescents suffers from a diagnosable mental health disorder (National Alliance on Mental Illness, n.d.). In Kentucky, the situation is even more dire—according to the Kentucky-specific data from the Youth Risk Behavior Survey, almost one-third of Kentucky youth report they are so sad, anxious, or hopeless they have stopped pursuing activities that they normally enjoy (Kann et al., 2016). The national data from this survey reflects an alarming trend: the percentages of youth who seriously considered attempting suicide and youth who made a suicide plan follow a quadratic pattern, decreasing from 1991-2009 but increasing from 2009-2015 (Kann et al., 2016).

Positive mental health, however, is critical for adolescents in several respects. Untreated mental health challenges significantly decrease quality of life, are detrimental to academic performance, and can lead to severe issues such as substance abuse or suicide. As Stagman and Cooper (2010) report, "children and youth with mental health problems have lower educational achievement, greater involvement with the criminal justice system, and fewer stable and longer-term placements in the child welfare system," a finding corroborated by several other studies (Erickson & Abel, 2013; Valdez, Lambert, & Ialongo, 2011). As further evidence that mental health issues jeopardize education and future success, over 40% of students affected by a mental health disorder do not complete secondary school, the highest dropout rate of any disability group (Wagner, Newman, Cameto, & Levine, 2005; National Alliance on Mental Illness, n.d.). Additionally, poor mental health in adolescence has been associated with future anxiety, depression, and suicide (Valdez, Lambert, & Ialongo, 2011).

While mental health is critical for adolescents, few receive appropriate intervention or treatment. The average delay between the onset of symptoms and treatment is 10 years and up to 80% of youth who require treatment do not receive it, indicating that youth are

unable to access suitable services (National Alliance on Mental Illness, n.d.; Stagman & Cooper, 2010). Services themselves also may be ineffective; a meta-analytic review by Farahmand, Grant, Polo, and Duffy (2011) identified only 17% of reviewed school-based mental health programs as effective. Though youth mental health is a consequential concern, few studies have attempted to elucidate adolescent perspectives on mental wellness. Understanding these perceptions, however, is pivotal to the improvement of the issue, as youth are the preeminent stakeholder in their own well-being and have unique insights into drivers of poor mental health.

Literature Review

Barriers to effective mental health prevention and treatment

A lack of mental health education, significant stigma surrounding mental health, and a lack of accessible services are the key factors upon which the literature converges as barriers to effective mental health prevention and treatment. Research suggests that both mental health education and mental health services are inaccessible and inadequate. Story and her colleagues report that "the prevalence of mental illness and death by suicide … may be related to limited mental health literacy" (Story et al., 2016). The lack of awareness caused by poor mental health education, in turn, leads to a second major barrier, stigma.

Stigma, often defined as "an actual/inferred attribute that damages the bearer's reputation and degrades him/her to a socially discredited status," prevents students from accessing necessary mental health services (Mukolo, Heflinger, & Wallston, 2010). For adolescents, a lack of mental health education is a key perpetuator of stigma, making it one of the most frequently reported reasons for not seeking treatment for mental distress (Jameson & Blank, 2007; Mukolo, Heflinger, & Wallston, 2010; Topkaya, 2015). Stigma increases when incorrect labels and stereotypes are applied to the mentally ill and research has found stigma levels to decrease with appropriate mental health education (Story et al., 2016; Larson & Corrigan, 2010).

Finally, many cannot access effective mental health intervention. A consensus has been established that a dearth of mental health providers, particularly in rural regions, renders services inaccessible (Jameson & Blank, 2007; Smalley et al., 2010). This shortage is particularly acute in Kentucky—two million Kentuckians reside in these mental health care professional shortage areas and less than 60% of the total need for mental health providers is met in the state (Kaiser Family Foundation, 2016).

Urban versus rural mental health

Mental health culture. Research agrees that residents of rural areas have unique attitudes and culture regarding mental health and mental health interventions that differ from the culture in urban areas. Rural residents have been found to have more significant stigmas surrounding mental illness due to values of self-sufficiency (Story et al., 2016; Bischoff et al., 2014). Focus groups conducted by Bischoff et al. (2014) found that "rural residents often do not 'even believe in therapists'" and that mental illness is considered particularly shameful in these communities. Bischoff's findings that rural mental health practices must be sensitive to this culture to be effective are corroborated by other rural health studies (Bischoff et al., 2014; Jameson & Blank, 2007).

Mental health service access. Limited access to mental health services and education in nonmetropolitan areas due to a lack of competent professionals may be a driver of stigma-focused rural mental health culture (Jameson & Blank, 2007; Smalley et al., 2010). Research is inconsistent, however, on whether this leads to increased mental illness rates in rural populations—Story et al. (2016) and Bischoff et al. (2014) found higher rates of mental illness in nonmetropolitan areas while Jameson and Blank (2007) stated that rate of illness was similar across rural-urban divides, but severity is increased in rural areas. Others report that urban youth are at a higher risk of experiencing mental illness than others students due to violence and poverty-related stressors (Farahmand, Grant, Polo, & Duffy, 2011; Valdez, Lambert, & Ialongo, 2011).

Gaps in the current literature

Though recognition and treatment of mental health disorders are critical, there remain significant gaps in the literature surrounding adolescent mental health.

Few recent studies, and none in Kentucky, have analyzed student perspectives on the issue, which are critical to inform the policies and programs that directly impact youth. Analysis of these perceptions, in turn, allows for the creation of more effective solutions (Aarons et al., 2009; Landeweer, Molewijk, Hem, & Pedersen, 2017). In Kentucky, no studies compare urban versus rural mental health of students, but these geographic distinctions are crucial to developing policies effective for both groups.

Therefore, the present study aims to fill this gap in the body of knowledge by answering the following question: What are the similarities and differences between the student-reported perceptions of mental health challenges facing urban versus rural Kentucky high school students? No hypothesis for this research was created to avoid potential researcher bias that could skew the analysis of the largely qualitative data. Instead, two assumptions were made. It was assumed that mental health is a concern in both rural and urban areas of Kentucky. More specifically, it was also assumed that mental health is a concern at the particular urban and rural schools at which the study was conducted.

Methodology

This mixed descriptive study involved collection of primarily qualitative, and some quantitative, data collected from focus groups. Data was analyzed by conducting a thematic analysis through coding in the qualitative analysis software ATLAS.ti to characterize the similarities and differences of perceptions of mental health among rural and urban Kentucky high schoolers. As opposed to surveys or interviews, focus groups were chosen as the data collection method for this study because, according to Bischoff et al. (2014), "they allow researchers to understand the group dynamics that surround an individual's perception and processing of the subject matter." Focus groups provide insight into the general attitude surrounding a topic, which is particularly useful to understand for mental health, which is heavily influenced by an individual's surrounding community. Additionally, a wide range of perspectives can be discussed during focus groups, as each participant's attitudes, culture, and life experience are varied. Group discussion allows participants to comment on others' ideas, leading to more productive conversations (Bischoff et al., 2014). Neither surveys nor individual interviews would allow the same degree and quality of insights that group conversations do.

Analysis of these rich discussions of youth perceptions elucidated similarities and differences across urban and rural adolescents, filling the gap of understanding student perspectives and answering the research question. This research, though specific to the state of Kentucky, provides a foundation upon which to base future local and far-reaching studies of mental health from a youth point of view.

Four total focus groups were conducted with Kentucky high school students—two at one urban Kentucky high school and two at one rural Kentucky high school. The US Department of Agriculture definition was used to classify schools as either rural or urban. This definition, often used in clinical psychology studies, assigns all counties in the United States a number on a scale of 1 (most urban) to 9 (most rural). Counties between 1 and 3 are considered urban, while counties rated 4-9 are considered rural (US Department of Agriculture, 2016). Though this definition has been criticized for its lack of preciseness on levels more specific than county borders, the majority of studies in this field continue to use this norm; therefore, this research uses the same definition (Jameson & Blank, 2007). The urban groups were conducted in Jefferson County, a 1 on the scale, and the rural groups were conducted in Nelson County, a 6 on the scale.

The principals of Kentucky schools in Jefferson and Nelson Counties were contacted to ask their interest in participating in this study. The first two schools to respond with written agreement of interest and approval for this study were used. For each focus group, 6-10 students were recruited through a convenience sampling method. This sampling method was selected because sampling by randomly selecting students was infeasible—schools were unwilling to release a student roster.

To identify the convenience sample, flyers were distributed within the building and over school announcements. Included on the flyer was information about the incentive for participating (free refreshments), a description of the study, and the contact in-

formation of the researcher. Interested students were asked to contact the researcher and return a consent form (included in Appendix A) with parental consent and student assent before participating.

As shown in Table 1 and Table 2, a total of 15 students participated in the urban focus groups and a total of 13 students participated in the rural focus groups. Each focus group fell within the target range of 6-10 participants. While the study was open to both female and male students, there were far more female than male participants. Grade levels of the students varied, but urban students were mostly sophomores and rural students were mostly seniors. This is likely due to interested students asking their friends of the same grade level to participate with them.

After enough students volunteered to participate, the researcher coordinated with individual students over text or email to identify a date and time for the focus group that was convenient. In coordination with school staff, a location that ensured students' privacy,

such as a library or closed classroom, was determined for the focus group.

To inform the questions asked during these sessions, a pilot focus group was conducted with six students at the researcher's school. Data from this pilot, the questions for which are included in Appendix B, were only used to modify the procedure for the actual focus groups and were not included in data analysis. Based on the questions that participants seemed to have difficulty answering and whether the data obtained answered the research question of this study, the focus group questions were revised, and the final version is included in Appendix C. The revised questions included largely open-ended qualitative items, though question 9, which asked all participants to rate factors contributing to stigma on a scale of 1-5 (5 being the most impact), was quantitative. This varying data type was included to provide a fuller picture of the emerging themes and to allow all students in the focus group to contribute their thoughts.

Table 1. Total participants in urban focus groups by gender and grade level

Table 1						
Characteristics of Urban Participants						
	Total Participants	**Females**	**Males**	**Freshmen**	**Sophomores**	**Juniors**	**Seniors**
Focus group 1	6	5	1	2	2	2	0
Focus group 2	9	7	2	0	9	0	0
Total	15	12	3	2	11	2	0

Table 2. Total participants in rural focus groups by gender and grade level

Table 2						
Characteristics of Rural Participants						
	Total Participants	**Females**	**Males**	**Freshmen**	**Sophomores**	**Juniors**	**Seniors**
Focus group 1	6	3	3	0	0	2	4
Focus group 2	7	6	1	0	2	0	5
Total	13	9	4	0	2	2	9

The researcher facilitated the discussion by asking the questions in Appendix C and prompting students with further information or follow-up questions as necessary. Data analysis, informed by the protocol of Fielden, Sillence, and Little (2011), who conducted youth focus groups about obesity, and a thematic analysis guide written by Braun and Clarke (2006), began by reviewing the notes and audio recording of the session immediately after the session ended. This review strengthened the remaining steps of analysis by allowing reflection on how the data collection procedure could be improved (Fielden, Sillence, & Little, 2011). In this study, no improvements were found to be necessary.

After all four focus groups were conducted, each discussion was transcribed verbatim by the researcher, including verbal ticks such as "like" or "um." Initial ideas about potential themes were recorded, considered an essential step in analysis (Fielden, Sillence, & Little, 2011). Resulting transcriptions and notes were then re-read at least three times to increase the researcher's familiarity with the data, allowing for accurate coding (Braun & Clarke, 2006). The analysis then moved to ATLAS.ti, a qualitative data analysis software, which was used to facilitate coding of the

data. The rural focus groups and urban focus groups were separated into different document groups in ATLAS.ti, allowing for separate analysis and later comparison. Using ATLAS.ti, the researcher assigned appropriate codes, which identified concepts in the data that related to the research question, to each statement made by focus group participants (Fielden, Sillence, & Little, 2011). Each initial code was categorized into an overarching theme, and themes that did not have sufficient support were discarded. A list of codes, descriptions, and groupings, exported from ATLAS.ti, is included in Appendix D. As suggested by Braun and Clarke (2006), the relationships among themes were placed into a thematic map for clearer visualization. Finally, the transcriptions were reviewed to ensure nothing was missed. Overall, the thematic analysis allowed for the capturing, characterization, description, and relation among the student-reported themes, answering the research question by revealing similarities and differences between rural and urban youth.

Results and Discussion

Significant themes

Four total focus groups, two in urban settings and two in rural settings, were conducted with Kentucky high school students. Thematic analysis of the four focus groups was informed by Fielden, Sillence, and Little (2011) and Braun and Clarke (2006) and conducted using ATLAS.ti coding software. Analysis revealed several significant similarities and differences between rural and urban settings. Students discussed both positive and negative influences on mental health in relation to two categories: contributors to mental health symptoms or contributors to mental health stigma. Each major theme connected to the broad category of the unique high school experience, further demonstrating the importance of capturing youth perspectives. Three themes—community interactions, overdose, and social media—represented the primary differences between the responses of rural and ur-

Figure 1. *Key themes identified through thematic analysis. Each theme related to the unique high school experience; red outlines represent negative influence on mental health, blue outlines represent positive influence, and outlines of both colors indicate both positive and negative influences.*
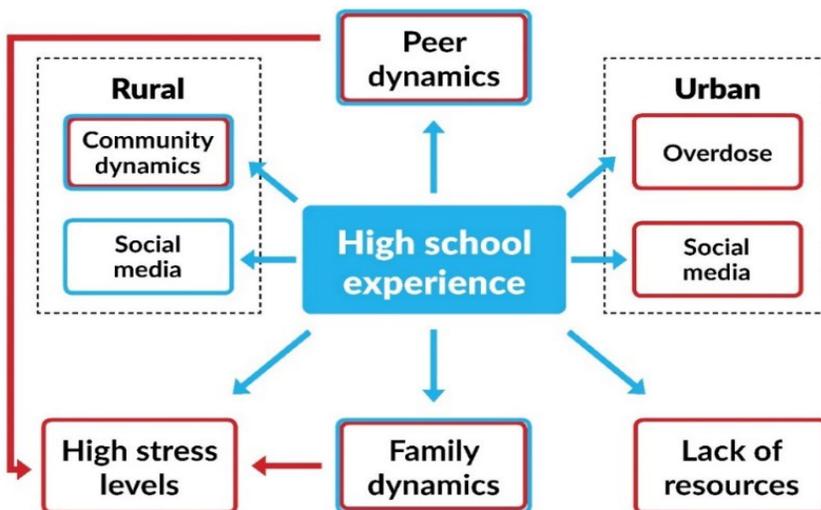
ban students. The following diagram represents major themes that arose, including similarities and differences and relationships among the key themes.

Urban and Rural Similarities

Thematic analysis revealed that several issues—family dynamics, peer interactions, lack of resources, and high stress levels—were reported by both urban and rural students. Students reported stress as a contributor to mental health symptoms, and lack of resources, family relationships, and peer relationships as driving both mental health symptoms and mental health stigma. Each of these themes is further explored.

Family Relationships. Participants in both the rural and urban focus groups stated that family relationships, particularly with parents, generally perpetuated both mental health symptoms and mental health stigma. Students felt pressured to meet their parents' high expectations or please their parents, particularly if they had exceptionally low or high achieving siblings. As one urban male participant stated, "I feel like I have to overcome, like compensate for both of their [his siblings'] mistakes and be even better than that so they [his parents] have a glory in their life." When compared to their siblings, students felt pressure from their parents to fill the shoes of older siblings or pave the way for younger siblings, leading to stress. Rural students stated, "you're supposed to literally pave the way for your younger siblings," and "I have two successful sisters that have gone through college … And I'm just trying to keep up." Urban and rural students also expressed the feeling that they'd be a burden on their parents if they were to experience or discuss mental health concerns; an urban participant stated "I feel like a lot of people don't even go to anyone [for mental health help] because they don't want to put that on anyone else."

Participants also felt that their parents didn't understand their circumstances; a rural student stated that "parents don't seem to really understand what's going on until you literally have to scream it at their face that this is what is happening." This disconnect prevented students from discussing mental health concerns with parents. Students also reported avoiding talking to their guidance counsellors about mental health for fear that their symptoms would be discussed with their parents.

In terms of mental health stigma, students felt that the generational gap between them and their parents led to misunderstandings and perpetuation of stigma. One student reported "In their [parents'] generation, there wasn't any understanding whenever it comes to mental health issues. It was either you're sane or you're insane." Participants generally felt that family members would be unsupportive or wouldn't understand mental health challenges because the current world presented unique difficulties regarding technology and contemporary political unrest. However, some students, particularly those who were open about personal experience with mental health issues, stated that their parents were supportive. These significant influences of parents and family on mental health, either positively or negatively, align with existing research. Smokowski et al. (2015) found that negative relationships between rural students and parents led to higher rates of anxiety and depression, while positive relationships were associated with lower rates of depression. Oldfield, Humphrey, and Hebron (2016) found a similar relationship, associating insecure parental attachment with emotional difficulties.

Peer interactions. Analysis of quotes about peer interactions demonstrated that similarly to how students felt about family interactions, rural and urban participants associated peers with both positive and negative impacts on mental health. Students felt that their close, trusted friends would be supportive if they were told that a peer was experiencing mental health symptoms. An urban participant stated, "If I came up to [friend's name] and was talking about how I had mental health symptoms, I think she'd be shocked at first, but she'd be very supportive."

However, both rural and urban students believed that friends with whom they were less close would deny the issue, make jokes at the expense of the student experiencing mental health challenges, or not take the issue seriously. For example, a rural student said, "One thing that's very prominent is the fact that whenever you tell somebody that you have anxiety or depression, they're like 'but you don't really, do you?'" Participants mentioned that these reactions, many of which occur through social media, may be due to a lack of awareness or understanding of mental health.

Students believed that a general culture of not taking mental health seriously—for example, an urban student stated "saying phrases like 'I'm gonna kill myself' is just so common that you just don't think it's true"—made it difficult to tell when students were truly struggling and when students were being facetious.

Additionally, urban and rural students both feared that if they were to discuss a mental health challenge with a peer, they would be judged and treated as an outcast. One participant said, "I'm scared, I don't want them to think differently of me, like I know judgment is a very big deal in our society" to explain why she was hesitant to start a conversation about mental health. This fear may drive mental health symptoms; a participant said, "a lot of people don't want to be judged so they keep it to themselves and it builds up and builds up just because they don't want other people to see them in a bad way," reflecting that students often hide their symptoms until they reach a breaking point.

This significant influence, both positive and negative, of peers on mental health is corroborated by current literature. Mackrell and Lavender (2004) examined the impact of peer relationships in the context of mental health, finding that peers are significant sources of support in crisis, while Jones et al. (2011) found that increased loneliness among youth led to a higher incidence of depression and suicide. Oldfield, Humphrey, and Hebron (2016) established that positive peer relationships are a strong predictor of well-being. Current research also demonstrates the negative influence of peers, particularly significant stigmatization and teasing of peers struggling with mental health challenges (Mackrell & Lavender, 2004; O'Driscoll, Heary, Hennessy, & Mckeague, 2012).

Lack of resources. Throughout the focus groups, students discussed a dearth of mental health resources as a perpetuating factor of mental health stigma and symptoms. Students cited a lack of awareness, a result of poor mental health education, as a major factor in stereotyping. For example, a rural male participant stated "A lot of people go through and see people who are depressed or anxious as just generally crazy … That's why people are probably so afraid to be able to be open about it too." While school counsellors and staff, hotlines, parents, therapy, medication, and friends were mentioned when students were asked what mental health resources were available, no other community resources or evidence-based programs were discussed.

One significant theme among both urban and rural students was the weaknesses of school counsellors in providing mental health guidance. Students reported being told that counsellors were an available resource, but they didn't feel as though counsellors would be helpful in mental health concerns. Urban students felt that counsellors were inaccessible, documenting a long appointment process before one could meet with a counsellor and feeling that their counsellors were too busy with other students or tasks to help. Rural students felt that their counsellors "probably wouldn't do jack about it," meaning that they would likely not do anything to address the concern. This is likely driven by Kentucky's lack of school counsellors; the student-to-counsellor ratio in 2014-15 was 453:1, close to double the recommended ratio of 250:1 (National Association for College Admission Counseling & American School Counsellor Association, n.d.). This lack of counsellors may contribute to their inaccessibility.

High stress levels. Students reported that balancing school with other obligations, such as work, maintaining a social life, standardized testing, applying for college, and feeling pressured to meet family expectations, led to high levels of stress. A rural student reported feeling overwhelmed, saying "It's hard to juggle it as a teenager because there's just so many things." Additionally, identify conflicts, a hallmark of adolescents' development, were reported by students as drivers of youth mental health symptoms. Students discussed struggling with determining who they are and what they'd like to pursue after high school. This pressure of feeling forced to plan the rest of their lives as teenagers compounded other stressors, such as school and social pressure. For example, one urban student stated, "I don't have that clear image of what I'm gonna do so I don't know what to do from here on out, it's confusing." Current literature supports this finding; teens report stress levels that are higher than those of adults and 30% feel depressed or sad because of stress (Bethune, 2014). Studies of both urban and rural adolescent populations found significant links between high stress levels and depressive symptoms (Carleton, Esparza, Thaxter, & Grant, 2008; Young & Chau, 2016).

Urban and Rural Differences

Thematic analysis of rural groups and urban groups showed three primary differences in mental health perceptions. These variations revolved around community interactions, social media, and overdose.

Community interactions. As opposed to urban students, rural students reported both positive and negative influences of community culture, while urban students believed that community culture had little impact on mental health. Rural students felt a strong sense of connection and comfort with their peers—rural focus group participants discussed feeling very open about broaching the topic of mental health with close friends. Students stated that "I know us friends are always here for each other" and "there's this mutual respect that we all have for each other," demonstrating their close bonds.

Simultaneously, however, rural participants felt that community culture had significantly more impact on stigma than urban students. Students believed that this stigma was a result of ingrained do-it-yourself attitudes and immense focus on religion. One participant said "My dad always taught me that if you can't do it yourself, then there's no point in trying at all," while another stated "they're [church members] like

Figure 2. *Average contributions of six factors to stigma, as reported by urban and rural students.*

'God's always with you, you should never be sad.' And I was like, 'well why am I sad? I must be upset about something.'" This finding is consistent with Bischoff et al. (2014)'s landmark study, which reported the importance of considering unique cultural factors when providing mental health care to rural patients.

Social media. Urban students considered social media to be largely detrimental to mental health, stating "Let's say I just post a picture … somebody can screenshot that and post it on their page and make fun of me," and "media is one of the biggest factors [that contributes to stigma], just because … people joke about depression and all that a lot."

However, rural students believed that social media can be beneficial to mental health, citing various websites as ways to cope with sadness. Students in one focus group agreed that watching inspirational or funny videos on YouTube allows them to relieve stress and feel better. Participants also found comfort in seeing others' mental health journeys on social media, which helped them feel less isolated.

Prior research has noted that social media may have negative impacts on mental health, including symptoms driven by cyberbullying (Brown & Bobkowski, 2011). Other studies, however, have found that students who spend more time on social media report lessened anxiety, possibly because they are using communication tools in a constructive manner (George, Russell, Piontak, & Odgers, 2017). Little research investigates differential influences of social media on urban versus rural adolescents, and more investigation is necessary to characterize relationships between youth social media use and community environment.

Overdose. Overdose of family members, friends, or peers as a contributor to mental health symptoms was reported solely by urban students. Both urban and rural students discussed drug use among adolescents as a coping mechanism, but no rural students mentioned overdose. This contrasts with national statistics—the nonmetro overdose death
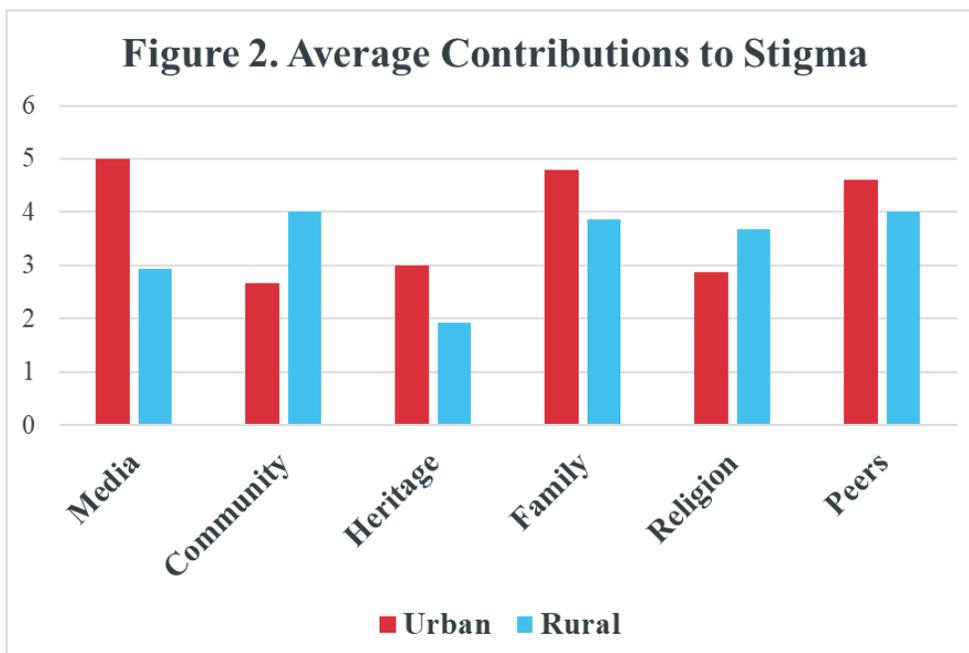
rate was slightly higher in 2015 than the metro overdose rate, at 17.0 cases per 100,000 people compared to 16.2 urban cases per 100,000 (Mack, Jones, & Ballesteros, 2017). This finding may be a result of the specific communities in which the study was conducted having a different relationship to drug overdose, but more investigation is necessary.

Quantitative data: contributions of factors to stigma

One quantitative item was included during the focus groups to evaluate the degree to which students believed different factors contributed to stigma. The mean values for each of these factors are included in Figure 2.

As this study was primarily qualitative, the sample size was relatively small, including a total of 28 students. A more comprehensive quantitative study with a larger sample size would be necessary to glean more insights from this data. However, this data does support the qualitative findings. The largest differences between urban and rural students were with media, with a difference of 2.07, and community culture, with a difference of 1.33, which were two of the three thematic differences between urban and rural areas.

Overall, analysis of quantitative and qualitative data revealed that the influence of family dynamics, peer interactions, lack of resources, and high stress levels were similarities across urban and rural students, while the roles of community culture, social media, and overdose represented differences. This finding summarizes adolescent perspectives to fill the preexisting gap of a lack of youth voice about mental health.

Limitations & Implications

The four focus groups conducted to gather data for this study were likely able to capture a representative and complete picture of student perceptions of mental health in the individual rural and urban high schools—Greg Guest and colleagues found that 90% of themes were able to be discovered after three to six focus groups (Guest, Namey, & Mckenna, 2017). However, the sample size of one rural and one urban high school limited this study in that the findings are not fully generalizable to urban or rural Kentucky high school students as a whole. While many of the

same themes would likely arise in other urban and rural schools, more focus groups would need to be conducted with students in other communities to generalize findings to all Kentucky high schoolers.

Additionally, the convenience sampling method used to recruit participants may have resulted in a sample of students who were more understanding of or comfortable discussing mental health. This may have biased the data to reflect more awareness of and less stigma or stereotyping around the issue. However, the themes relating to driving factors of mental health challenges and stigma around mental health challenges, which represent the bulk of the data collected, are likely the same across populations with or without interest in mental health.

Though this study had some limitations, the data generated is still valuable in understanding the unique factors that drive mental health symptoms and stigma among Kentucky high schoolers. This represented a foundational study in Kentucky student mental health—no previous research has evaluated adolescents' perceptions of the issue. Understanding these perspectives is critically important; students have a unique understanding of their own mental health concerns and the policies and programs that intend to address their well-being. If effective ways to improve youth mental health are to be developed, students' perspectives must be understood. This research provides a base upon which to further explore youth mental health through additional focus groups and targeted surveys.

Conclusion and Future Directions

To allow for generalization of these themes to all Kentucky students, a further study will involve additional focus groups across more urban and rural schools, geographic locations, and communities in the state. A quantitative survey will be developed based on the results of these additional sessions. Targeting the survey to certain themes that arose from this research and that will arise in further studies will allow the survey to focus on the most important themes. Eventually, a policy or program recommendation to improve youth mental health that applies to urban and rural Kentucky high schoolers will be developed from this work. A recommendation informed

by student perspectives will be the most effective in improving the well-being of Kentucky youth.

The emerging themes identified in these focus groups, supplemented by quantitative data, represent new insights about mental health through the lens of adolescents. While research has previously been conducted regarding adult perspectives on mental health issues, evaluating student perspectives revealed mental health factors that revolve around the high school experience (Story et al., 2016; Bischoff et al., 2014; De-Rigne, Porterfield, & Metz, 2009; Farahmand, Grant, Polo, & Duffy, 2011). Investigation and comparison of rural and urban perspectives showed that the influence of family, peers, high stress levels, and lack of resources were similar between both groups, while overdose, social media, and community culture were different.

These results indicate that several factors, particularly social media and overdose, need further investigation. Results from this work will provide a foundation for further research investigating youth perspectives of mental health and an eventual policy or program recommendation to improve adolescent well-being.

References

Aarons, G. A., Wells, R. S., Zagursky, K., Fettes, D. L., & Palinkas, L. A. (2009). Implementing evidence-based practice in community mental health agencies: A multiple stakeholder analysis. *American Journal of Public Health*, 99(11), 2087–2095. http://doi.org/10.2105/AJPH.2009.161711

Bethune, S. (2014). Teen stress rivals that of adults. *Monitor on Psychology,45*(4), 20. doi:10.1037/e508692014-007

Bischoff, R. J., Reisbig, A. M., Springer, P. R., Schultz, S., Robinson, W. D., & Olson, M. (2014). succeeding in rural mental health practice: Being sensitive to culture by fitting in and collaborating. *Contemporary Family Therapy, 36*(1), 1-16. doi:10.1007/s10591-013-9287-x

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology,3*(2), 77-101. doi:10.1191/1478088706qp063oa

Brown, J. D., & Bobkowski, P. S. (2011). Older and newer media: Patterns of use and effects on adolescents health and well-being. *Journal of Research on Adolescence,21*(1), 95-113. doi:10.1111/j.1532-7795.2010.00717.x

Carleton, R. A., Esparza, P., Thaxter, P. J., & Grant, K. E. (2008). Stress, religious coping resources, and depressive symptoms in an urban adolescent sample. *Journal for the Scientific Study of Religion,47*(1), 113-121. doi:10.1111/j.1468-5906.2008.00395.x

DeRigne, L., Porterfield, S., & Metz, S. (2009). The influence of health insurance on parent's reports of children's unmet mental health needs. *Maternal & Child Health Journal, 13*, 176-186. doi:10.1007/s10995-008-0346-0

Erickson, A., & Abel, N. R. (2013). A high school counsellor's leadership in providing school-wide screenings for depression and enhancing suicide awareness. *Professional School Counseling, 16*(5), 283-289. Retrieved July 3, 2017, from http://www.jstor.org/stable/profschocoun.16.5.283

Farahmand, F. K., Duffy, S. N., Tailor, M. A., DuBois, D. L., Lyon, A. L., Grant, K. E., & ... Nathanson, A. M. (2012). Community-based mental health and behavioral programs for low-income urban youth: A meta-analytic review. *Clinical Psychology: Science & Practice*, 19(2), 195-215. doi:10.1111/j.1468-2850.2012.01283.x

Farahmand, F. K., Grant, K. E., Polo, A. J., & Duffy, S. N. (2011). School-based mental health and behavioral programs for low-income, urban youth: A systematic and meta-analytic review. *Clinical Psychology: Science & Practice, 18*(4), 372-390. doi:10.1111/j.1468-2850.2011.01265.x

Fielden, A. L., Sillence, E., & Little, L. (2011). Children's understandings' of obesity, a thematic analysis. *International Journal of Qualitative Studies on Health and Well-Being*, 6(3), 10.3402/qhw.v6i3.7170. http://doi.org/10.3402/qhw.v6i3.7170

George, M. J., Russell, M. A., Piontak, J. R., & Odgers, C. L. (2017). Concurrent and subsequent associations between daily digital technology use and high-risk adolescents' mental health symptoms. *Child Development,89*(1), 78-88. doi:10.1111/cdev.12819

Guest, G., Namey, E., & Mckenna, K. (2017). How many focus groups are enough? Building an evidence base for nonprobability sample sizes. *Field Methods, 29*(1), 3-22. doi:10.1177/1525822x16639015

Jameson, J., & Blank, M. B. (2007). The role of clinical psychology in rural mental health services: Defining problems and developing solutions. *Clinical Psychology: Science & Practice, 14*(3), 283-298. doi:10.1111/j.1468-2850.2007.00089.x

Jones, A. C., Schinka, K. C., Dulmen, M. H., Bossarte, R. M., & Swahn, M. H. (2011). Changes in loneliness during middle childhood predict risk for adolescent suicidality indirectly through mental health problems. *Journal of Clinical Child & Adolescent Psychology,40*(6), 818-824. doi:10.1080/15374416.2011.614585

Kaiser Family Foundation. (2016). mental health care health professional shortage areas (HPSAs). Retrieved November 1, 2017, from https://www.kff.org/other/state-indicator/mental-health-care-health-professional-shortage-areas-hpsas

Kang-Yi, C. D., Mandell, D. S., & Hadley, T. (2013). School-based mental health program evaluation: Children's school outcomes and acute mental health service use. *Journal Of School Health*, *83*(7), 463-472.

Kann, L., McManus, T., Harris, W. A., Shanklin, S. L., Flint, K.H., Hawkins, J., . . . Zaza, S. (2016). Youth risk behavior surveillance — United States, 2015. *Surveillance Summaries, 65*, 1-174. Retrieved October 3, 2017, from https://www.cdc.gov/mmwr/volumes/65/ss/ss6506a1.htm.

Landeweer, E., Molewijk, B., Hem, M. H., & Pedersen, R. (2017). Worlds apart? A scoping review addressing different stakeholder perspectives on barriers to family involvement in the care for persons with severe mental illness. *BMC Health Services Research, 17*(1). doi:10.1186/s12913-017-2213-4

Larson, J. E., & Corrigan, P. W. (2010). Psychotherapy for self-stigma among rural clients. *Journal of Clinical Psychology, 66*, 524-536. doi:10.1002/jclp.20679

Mack, K. A., Jones, C. M., & Ballesteros, M. F. (2017). Illicit drug use, illicit drug use disorders, and drug overdose deaths in metropolitan and nonmetropolitan areas — United States. *Morbidity and Mortality Weekly Report, 66*(19), 1-12. doi:10.15585/mmwr.ss6619a1

Mackrell, L., & Lavender, T. (2004). Peer relationships in adolescents experiencing a first episode of psychosis. *Journal of Mental Health, 13*(5), 467-479. doi:10.1080/09638230400006775

Mukolo, A., Heflinger, C. A., & Wallston, K. A. (2010). The stigma of childhood mental disorders: A conceptual framework. *Journal of the American Academy of Child and Adolescent Psychiatry, 49*(2), 92-198. Retrieved November 3, 2017.

National Alliance on Mental Illness. (n.d.). Mental Health Facts CHILDREN & TEENS. Retrieved October 1, 2017, from https://www.nami.org/NAMI/media/NAMI-Media/Infographics/Children-MH-Facts-NAMI.pdf.

National Association for College Admission Counseling & American School Counsellor Association. (n.d.). STATE-BY-STATE STUDENT-TO-COUNSELLOR RATIO REPORT 10-YEAR TRENDS. Retrieved March 7, 2018, from https://www.nacacnet.org/globalassets/documents/publications/research/ratioreportdr3.pdf.

O'Driscoll, C., Heary, C., Hennessy, E., & Mckeague, L. (2012). Explicit and implicit stigma towards peers with mental health problems in childhood and adolescence. *Journal of Child Psychology and Psychiatry,53*(10), 1054-1062. doi:10.1111/j.1469-7610.2012.02580.x

Oldfield, J., Humphrey, N., & Hebron, J. (2016). The role of parental and peer attachment relationships and school connectedness in predicting adolescent mental health outcomes. *Child and Adolescent Mental Health,21*(1), 21-29. doi:10.1111/camh.12108

Smalley, K. B., Yancey, C. T., Warren, J. C., Naufel, K., Ryan, R., & Pugh, J. L. (2010). Rural mental health and psychological treatment: A review for practitioners. *Journal Of Clinical Psychology, 66*(5), 479-489. Retrieved October 4, 2017.

Smokowski, P. R., Bacallao, M. L., Cotter, K. L., & Evans, C. B. (2015). The effects of positive and negative parenting practices on adolescent mental health outcomes in a multicultural sample of rural youth. *Child Psychiatry & Human Development,46*(3), 333-345. doi:10.1007/s10578-014-0474-2

Stagman, S., & Cooper, J. L. (2010). Children's Mental Health: What Every Policymaker Should Know. Retrieved October 2, 2017, from http://www.nccp.org/publications/pdf/text_929.pdf

Story, C. R., Kirkwood, D., Parker, S., & Weller, B. E. (2016). evaluation of the better todays/better tomorrows youth suicide prevention program: Increasing mental health literacy in rural communities. *Best Practice In Mental Health*, *12*(1), 14-25.

Topkaya, N. (2015) Factors Influencing Psychological Help Seeking in Adults: A Qualitative Study. *Educational Sciences: Theory & Practice*, *15*(1), 21–31. doi:10.12738/estp.2015.1.2094.

US Department of Agriculture. (2016, October 12). Rural-Urban Continuum Codes. Retrieved October 10, 2017, from https://www.ers.usda.gov/data-products/rural-urban-continuum-codes/

Valdez, C., Lambert, S., & Ialongo, N. (2011). Identifying patterns of early risk for mental health and academic problems in adolescence: A longitudinal study of urban youth. *Child Psychiatry & Human Development*, *42*(5), 521-538. doi:10.1007/s10578-011-0230-9

Wagner, M., Newman, L., Cameto, R., & Levine, P. (2005). *Changes Over Time In The Early Postschool Outcomes Of Youth With Disabilities. A Report Of Findings From The National Longitudinal Transition Study (NLTS) And The National Longitudinal Transition Study-2* (NLTS2). Menlo Park, CA: SRI International.

Young, C. C., & Chau, L. L. (2016). In their own words: Rural adolescent stressors and relationship to depressive symptoms. *Western Journal of Nursing Research,39*(9), 1255-1270. doi:10.1177/0193945916670131

Appendix A

The consent form on the following page is the form, including both parent or guardian consent and youth assent, that all participants returned to the researcher prior to the focus group sessions.

Human Informed Consent Form

Instructions to the Student Researcher(s): An informed consent/assent/permission form should be developed in consultation with the Adult Sponsor, Designated Supervisor or Qualified Scientist.
This form is used to provide information to the research participant (or parent/guardian) and to document written informed consent, minor assent, and/or parental permission.

- When written documentation is required, the researcher keeps the original, signed form.
- Students may use this sample form or may copy ALL elements of it into a new document.

If the form is serving to document parental permission, a copy of any survey or questionnaire must be attached.

Student Researcher(s): ███████

Title of Project: A Descriptive Study of Adolescent Perceptions of Rural Versus Urban Kentucky High School Student Mental Health Challenges

I am asking for your voluntary participation in my science fair project. Please read the following information about the project. If you would like to participate, please sign in the appropriate area below.

Purpose of the project: The purpose of my project is to determine the differences in the student-reported perceptions of mental health challenges facing rural versus urban Kentucky high schoolers.

If you participate, you will be asked to: You will be asked to participate in a focus group during which I will ask questions about mental health at your school, mental health services and resources offered at your school or in your community, and the best ways to address student mental health challenges.

Time required for participation: Focus groups will last between 1-1.5 hours.

Potential Risks of Study: We will be discussing mental health, which can be a sensitive topic.

Benefits: These focus groups will give you the opportunity to participate in valuable research that may permanently change the way mental health is addressed in Kentucky schools. Additionally, refreshments will be provided.

How confidentiality will be maintained: Participants will be fully anonymous and names will not be collected. Any names mentioned during the focus groups will be redacted or made anonymous in the final paper and presentation.

If you have any questions about this study, feel free to contact:

Adult Sponsor/QS/DS: ███████   Phone/email: ███████

Voluntary Participation:
Participation in this study is completely voluntary. If you decide not to participate there will not be any negative consequences. Please be aware that if you decide to participate, you may stop participating at any time and you may decide not to answer any specific question.

By signing this form I am attesting that I have read and understand the information above and I freely give my consent/assent to participate or permission for my child to participate.

Adult Informed Consent or Minor Assent   Date Reviewed & Signed: _____

Research Participant Printed Name: _____   Signature: _____

Parental/Guardian Permission (if applicable)   Date Reviewed & Signed: _____

Parent/Guardian Printed Name: _____   Signature: _____

International Rules: Guidelines for Science and Engineering Fairs 2017–2018 student.societyforscience.org/intel-isef   Page 37

Appendix B

Pilot focus group questions:

What does mental health mean to you?

Do you associate a stigma with "mental health?" Why?

How do you think the stigma surrounding mental health is influenced by cultural factors?

What do you think contributes the most to development of mental health challenges among high schoolers?

What do you think is the most significant barrier for high school students to accessing mental health treatment?

How does your school address mental health? Is it effective? Why or why not?

Are you aware of any good resources you could use if you thought you were experiencing a mental health challenge? Why do you like those resources?

What would help you better discuss mental health topics with your family or peers?

What do you think is the best way to prevent and treat mental health challenges?

Is there anything else you'd like to tell the group?

Appendix C

Finalized focus group questions:

Tell me your name and your favorite flavor of ice cream. (Icebreaker)

What do you think of when you hear the phrase "mental health"?

When you hear about someone who is experiencing mental health symptoms, what are your first thoughts?

Follow-up question: How do you imagine your friends would respond to this news?

Follow-up question: To what extent do you think there's a stigma attached to people experiencing mental health symptoms? Stigma is defined as an attribute that an actual or inferred attribute that damages the bearer's reputation and degrades him or her to a socially discredited status.

How can you tell when you or your peers are experiencing mental health symptoms?

What do you think are some of the factors that contribute to high school students experiencing mental health symptoms?

What do you or your peers do to deal with mental health symptoms?

Are you aware of any good resources within or outside of school you could use if you thought you were experiencing a mental health challenge?

Follow-up question: What's good about those resources?

What gets in the way of more students using those resources?

I'm going to read a list of factors and ask you about how strongly they contribute to the stigma surrounding mental health. Please hold up fingers from 1-5, with five being the strongest impact on stigma. Factors included community culture, religious culture, heritage, family, peers, and media.

What stands out most to you about how these different factors contribute to the stigma around mental health?

If you were experiencing more mental health symptoms, what would you want people in your life to do for you?

Is there anything else you'd like to tell the group?

Appendix D

This appendix includes a list of codes, grouped by the thematic grouping in ATLAS.ti. The "theme" grouping of codes, at the end of the appendix, indicates codes used to classify quotes into broad categories, which facilitated analysis. Themes for the thematic analysis were then identified by examining relationships among individual codes and code groups.

Project: AP Research

Report created by Allison on 4/20/2018

Code Report – Grouped by: Code Groups

All (79) codes

Groupless

13 Codes:

◯ environment

Comment: by Allison

When students discuss the impact of environmental factors on mental health

◯ good-quote

Comment: by Allison

Notable or good quotes

◯ honesty

Comment: by Allison

Honesty or getting to the point when it comes to interactions about mental health

◯ isolation

Comment: by Allison

When students discuss isolation, feeling isolated, etc

◯ listen

Comment: by Allison

Listening to someone with mental health concerns

◯ medication

Comment: by Allison

Medication in reference to treating mental health disorders

◯ personality

Comment: by Allison

When participants discuss the role of personality in mental health, whether it's negative, positive, or neutral statement of fact

◯ spamaccount

Comment: by Allison

For discussion about spam accounts on social media

◯ support

Comment: by Allison

Discussing wanting mental health support/discussing support in general

◯ treatnormally

Comment: by Allison

Discussing wanting to be treated normally

◯ trust

Comment: by Allison

Theme of being able to trust or connect with or feel close with someone or a group

◯ understand

Comment: by Allison

When students discuss wanting to be understood or the role of someone else understanding what the person is going through

◯ unexpected

Comment: by Allison

When participants discuss how mental health symptoms can be unexpected

Negative influence

36 Codes:

◯ n-awareness

Comment: by Allison

When participants discuss lack of awareness/how lack of awareness is bad

◯ n-balance

Comment: by Allison

Negative effects or influence of having to balance so many things at once

◯ n-beingdifferent

Comment: by Allison

Not wanting to stand out or be different

◯ n-burden

Comment: by Allison

Negative influence of feeling like a burden

◯ n-community

Comment: by Allison

Negative influence of community and community culture

◯ n-coping

Comment: by Allison

When participants discuss negative coping mechanisms.

◯ n-counsellor

Comment: by Allison

Negative or unhelpful school counsellors

◯ n-cyberbullying

Comment: by Allison

For discussion about cyberbullying

◯ n-denial

Comment: by Allison

When participants discuss denial of symptoms

◯ n-drugs

Comment: by Allison

When participants discuss drugs and negative influences on mental health

◯ n-expectations

Comment: by Allison

Negative influence of expectations, from parents, self, or anyone

◯ n-failure

Comment: by Allison

Negative influence of fear of failure or of making mistakes

◯ n-family

Comment: by Allison

Negative influence of family on mental health

◯ n-future

Comment: by Allison

Not knowing about the future is stressful

○ n-gender

Comment: by Allison

Negative gender biases, stereotypes, influence

○ n-generationalgap

Comment: by Allison

Discussing a generational gap/ discussing the differences in the "times" when students' relatives were young, etc

○ n-heritage

Comment: by Allison

Negative influence of heritage, culture of ethnic background

○ n-hidesymptoms

Comment: by Allison

When participants discuss hiding mental health symptoms

○ n-identity

Comment: by Allison

Identify conflict or negative influence of identity

○ n-internalthought

Comment: by Allison

Negative internal thoughts/ cycles of spiraling, etc

○ n-job

Comment: by Allison

Negative effects of having a job or balancing work with other things

○ n-joking

Comment: by Allison

This code is for when people discuss joking about mental health or not taking mental health seriously in a negative way.

○ n-judgement

Comment: by Allison

Negative influence of judgement

○ n-media

Comment: by Allison

Negative influence of media on mental health

○ n-money

Comment: by Allison

Negative influence of money or worrying about finances on mental health

○ n-noresources

Comment: by Allison

Not knowing about resources or not knowing if/what resources are available

○ n-overdose

Comment: by Allison

Negative influence of peer or family overdose

○ n-peers

Comment: by Allison

Negative peer influences

○ n-school

Comment: by Allison

Negative impact of school/standardized testing, often in terms of causing mental health symptoms

○ n-selfpressure

Comment: by Allison

High self-expectations or self pressure

○ n-sleep

Comment: by Allison

Not getting enough sleep

○ n-solvealone

Comment: by Allison

When people discuss trying to resolve mental health symptoms on their own

○ n-sports

Comment: by Allison

Negative influence of sports on mental health

○ n-stereotype

Comment: by Allison

When participants seem to have a negative stereotype around mental health or mention a negative stereotype

○ n-stress

Comment: by Allison

Negative influence of stress

○ n-treateddifferently

Comment: by Allison

When people discuss being treated differently/treating others differently

Positive influence

11 Codes:

○ p-club

Comment: by Allison

Positive influence of a club

○ p-community

Comment: by Allison

When students describe a close community/positive influences of community

○ p-coping

Comment: by Allison

Positive coping mechanisms

○ p-exercise

Comment: by Allison

Exercising and positive influences on mental health

○ p-family

Comment: by Allison

Positive influence of family on mental health

○ p-music

Comment: by Allison

Positive effect of music on mental health

○ p-outlet

Comment: by Allison

Positive coping through outlets

○ p-peers

Comment: by Allison

Positive influence of peers

○ p-religion

Comment: by Allison

Positive influence of religion or church

○ p-school

Comment: by Allison

Positive influence of school, including teachers, on mental health

○ p-sleep

Comment: by Allison

Positive effects of sleep on men-

tal health

Speakers-Rural

4 Codes:
○ B-Rural
Comment: by Allison
This code is for when boys are speaking during the rural focus groups.
○ Group-Rural
Comment: by Allison
This code is for when the group is speaking during rural focus groups.
○ G-Rural
Comment: by Allison
This code is for when girls are speaking during rural focus groups.
○ Moderator-AT
Comment: by Allison
This code is for the moderator speaking in both the rural and urban focus groups.

Speakers-Urban

4 Codes:
○ B-Urban
Comment: by Allison
This code is for when urban boys are speaking during focus groups.
○ Group-Urban
Comment: by Allison
This code is for when the group is speaking during urban focus groups.
○ G-Urban
Comment: by Allison
This code is for when urban girls are speaking.
○ Moderator-AT
Comment: by Allison
This code is for the moderator speaking in both the rural and urban focus groups.

Symptoms

7 Codes:
○ s-anxiety
Comment: by Allison
When anxiety is discussed
○ s-actdifferently
Comment: by Allison
Symptom of acting differently, commonly seen in question 4
○ s-apathy
Comment: by Allison
When students discuss the symptom of apathy
○ s-eating
Comment: by Allison
Symptom of changing eating habits
○ s-overwhelmed
Comment: by Allison
Feeling overwhelmed
○ s-sleep
Comment: by Allison
Changing sleep habits as a symptom
○ s-smallchange
Comment: by Allison
When students discuss small changes in behavior

Themes

5 Codes:
○ t-coping
Comment: by Allison
Theme of coping mechanisms
○ t-interaction
Comment: by Allison
When participants are discussing an interaction between them and someone else about mental health, negative, positive, or neutral
○ t-resources
Comment: by Allison
Anything relating to mental health resources, education, treatment, or other
○ t-stigma
Comment: by Allison
Any time participants are referring to stigma, negative, positive, or neutral
○ t-symptoms
Comment: by Allison
Anything relating to mental health symptoms, perpetuating them or causing them