questions were asked twice: once for with students receiving specially designed instruction and/or accommodations for mental health concerns via Individual Education Programs (IEPs) and 504 plans; and once for students who did not.

The final question was an open-ended request for comments regarding facilitators and barriers to mental health RTI in their settings, including key model features of systematic screening, providing and evaluating effective interventions, monitoring and communicating about students' mental health needs, progress and outcomes.

It should be noted that while all respondents were anonymous, in addition all elements that earned approval by the University's Human Subjects review Board (HSRB), in the invitation to take the survey, potential participants were notified that at the end of the survey, whether they completed it or not, they could self-identify (name, mailing address, preferred email and phone number) and choose to: 1) enter a drawing for one of 10 gift cards, each with a value of 50 US dollars; 2) indicate their interest in being contacted by the researcher for any reason including to discuss their current practices or to request more information; or 3) both. These three options were accessed via an unlinked Uniform Resource Locator (URL) generated by Qualtrics. Thus, anonymity was preserved.

3.3 Analysis

Before the data analysis, variables were examined for outliers and missing cells. Incomplete surveys and those completed by individuals other than licensed, practicing school psychologists were not included for analysis. Descriptive statistics were completed using data analysis tools available through the Qualtrics platform and the IBM Statistical Package for the Social Science (SPSS, V 23.0). Word-based analysis was used to identify themes in open-ended responses.

4. Results

Table 1 summarizes the demographic characteristics of the respondents, with special focus on one current school-based setting. The average number of years respondents had been employed as licensed school psychologists in public or private schools in Massachusetts and/or another state was just under 10 years ($\bar{x} = 9.7$). However, in terms of total years, their range of experience varied widely: from less than one full year to thirty-seven years. More than half of respondents were early career professionals, with five or less years of experience.

In terms of the grade levels of students they worked with on a regular basis, almost 70% of respondents indicated early childhood and elementary school grades. Approximately the same percentage of respondents regularly worked in middle school (19%) and high school (19.7%) settings. Very few worked with students who are eligible for specially designed instruction until they turn 22 years old (1.1%) or students of any age who receive specially designed instruction outside of a public-school district or collaborative (0.7%).

Table 1. Demographics of Respondents (n=174)

Variable	Number	Percentage
Years of Experience		
<1	24	13.8
1 to 5	67	38.5
6 to 10	21	12.1
11 to 15	16	9.2
16 to 20	14	8.0
21 to 25	16	9.2
26 to 30	10	5.7
31-35	4	2.3
36+	2	1.1
School Level		
PreK	6	3.4
PreK-2	10	5.7
Elementary	93	53.4
Combined Elementary-Middle	2	1.1
Middle	20	11.5
Combined Middle-High School	4	2.3
High School	39	22.4
School Type		
Traditional Public	170	97.7
Public Charter	0	0
Private	4	2.3
School Locale		
Rural	35	20.1
Suburban	106	60.9
Urban	33	19.0
School Diversity		
More Diverse	42	24.1
Similar	27	15.5
Less Diverse	105	60.3

When asked to focus on a single school to discuss mental health RTI practices, as highlighted in, over half of respondents chose elementary schools. Approximately one-quarter

of respondents chose to focus on high school, while the remainder was evenly divided between middle school and preschool settings. Several focused on schools with less typical grade configurations, i.e., spanning elementary through middle school grades or middle through high school grades. The vast majority, almost two-thirds of these schools, were classified as suburban. The remainder of the schools were evenly described as being in rural or urban locations. Almost all of schools were public as opposed to private schools.

Relative to the racial and ethnic diversity of the students in the schools, only 15.5% of respondents indicated that school reflected the diversity of students enrolled in Massachusetts public schools (63% White; 19% Hispanic; 9% African-American/Black; 7% Asian) while four-times that amount of respondents indicated that their schools were less diverse, i.e., lower percentages of one or more groups relative to students identified as White.

Though less than twenty percent of all respondents reported that their schools engaged in mental health screenings for all students, as reflected in Table 2, of those that did, over fifty percent did so two or more times annually.

Table 2. Percentage Conducting Universal Screening & Frequency

	Number	Percentage
Universal Screening		
No	146	83.9
Yes	28	16.1
Times per year		
1	9	32.1
2	12	42.8
3	2	7.1
Other	5	17.9

As summarized in Figure 2, schools engaging in universal screening generally did so using one or more published tools available as part of commercially packaged as RTI "systems" or "suites." From the list provided, respondents reported using: the Behavioral and Emotional Screening System (BESS), the Behavior Intervention Monitoring System (BIMAS), and Review360, Break Free from Depression (Break Free) and Signs of Suicide. The BESS, BIMAS and Review360 focus on mental health concerns. Break Free and SOS are curriculums available at no cost and include related screening tools. No respondents reported using the School Wide Information System

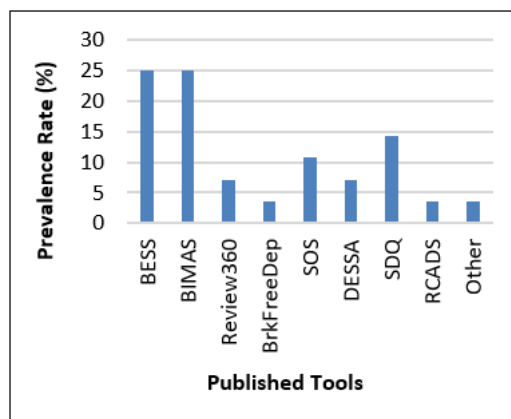(SWIS), which may be used to track both academic and mental health data.

Figure 2. Published Tools Used in Universal Screening & Monitoring

Besides the options provided, respondents indicated that they used other tools for mental health screening. These included the Strengths and Difficulties Questionnaire (SDQ) and the Revised Children's Anxiety and Depression Scale (RCADS), both of which are available online and free of charge. In addition, some respondents used the Devereux Student Strengths Assessment (DESSA) Tool, a rating scale that is available for purchase. One respondent reported that their school used a published tool but did not name it.
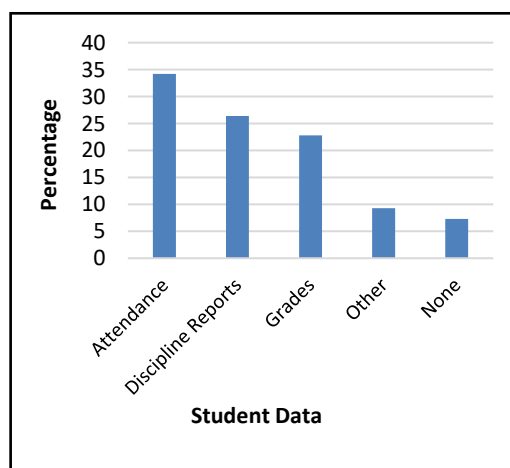

Figure 3. Other Data Used to Identify At-Risk Students

As highlighted in Figure 3, of the data readily available for all students, attendance (absent/tardy/early dismissal) was used by over one-third of schools to identify those at-risk for mental health problems. This was followed in

roughly equal percentages (one-quarter), by disciplinary referrals and poor or declining grades. Just under ten percent of respondents reported that visits to the nurse's office and behavior tracking by individual teachers was also gathered to screen for potential mental health concerns. Almost the same amount of respondents indicated that no additional data was gathered.

Table 3. Recording Non-IEP or 504 Mental Health Concerns

Recording Method (n=174)	Number	Percentage
Hardcopy	19	10.9
Google Docs	31	17.8
Other Electronic Means	14	8.0
Varies	29	16.7
Not Systematically Recorded	81	46.5
Personnel Responsible (n=153)		
Mental Health Team	79	51.6
Administrator	2	1.3
Mental Health Individual	65	42.5
Teacher	7	4.2

Respondents' characterizations of how the potential or demonstrated problems of students who do *not* receive services or accommodations specifically for mental health concerns (via IEPs or 504 plans) previewed their open-ended responses regarding the (mostly) barriers and facilitators regarding mental health RTI. Almost half of respondents indicated that, to their knowledge, any concerns about the mental health of their students (who did not receive services or accommodations specifically for mental health concerns), was not systematically recorded. One-quarter of respondents recorded the concerns electronically through limited access electronic means, e.g., google docs, the local data management system. Roughly ten percent recorded the concerns in hard copy (paper) format like a notebook or three-ring binder. Almost twenty percent reported that concerns about students' mental health were recorded but not in a consistent or centralized matter: recording varied with different grade levels or teams. Half of respondents indicated that individuals were responsible for recording and monitoring students' mental health over time.

Participants provided 316 discrete responses to the open-ended question regarding facilitators and barriers to Mental Health RTI. Figure 4

summarizes the most common themes identified by respondents in order. These were: available resources to support students, communication, expertise and leadership. These factors were categorizes as facilitators or inhibitors depending on where they fell on several continua which may described as: abundant to absent; systematic to idiosyncratic; consistent versus variable; and comprehensive to undeveloped. Available resources included funding, tools and human capital. Comments regarding communication generally referred to those among personnel (administration, faculty, mental health, other support staff) in one school or among settings, however, some respondents mentioned parents. Comments regarding leadership referred top-down versus grassroots perceptions of the need for mental health RTI, tacit or explicit support through actions and words, and ownership through roles and responsibilities. Training and expertise comments ranged from data-analysis and interpretation to providing preventative services and direct interventions
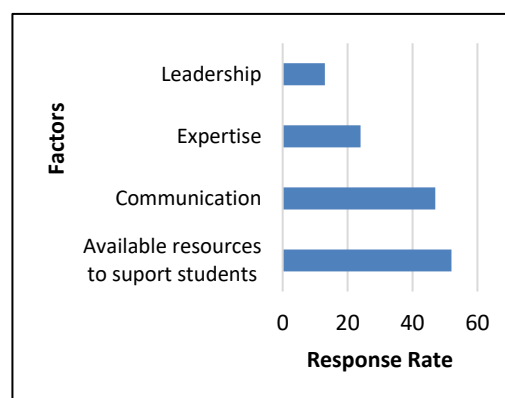

Figure 4. Facilitators and Barriers to Mental Health RTI

Finally, while almost half of respondents self-identified to be entered into the Visa gift card drawing, less than ten percent of self-identified to be contacted to discuss mental health RTI. Follow-up interviews and case studies are currently underway.

5. Discussion

As many as 80% of youth in US schools who have moderate to severe mental health needs receive no treatment. The short- and long-term consequences of untreated and unmonitored mental health problems that begin in childhood and adolescence are dire and well-

documented. Legislative and educational initiatives at both the national and state levels conceptual frameworks for prioritizing student mental health outcomes within school settings but lack research-based guidelines to implement and evaluate interventions or monitor mental health progress. Similarly, though Response to Intervention (RTI) is a promising broad conceptual model of providing continuum of effective interventions for a wide variety of academic and social, emotional and behavioral concerns in school, the research and dialog around RTI has been quite narrow, with the vast majority focusing on academics. Unlike the plethora of instruction to create and enact an academic-RTI, the literature on RTI for mental health is scant, generally focusing on the need for universal screening and providing only general principles and suggested elements schools and districts.

Seemingly unique in its focus and scope, this study sought to begin to address the literature gap around best practice guidelines and procedures to provide tiered systems of school-based supports to meet the mental health needs of children and adolescents by first identifying current practices, as well as, perceived enhancers and inhibitors.

Preliminary results of a state-wide survey of 174 school psychologists employed in public or private schools found that only 16% of schools engaged in universal mental health screening two or more times annually. Though slightly higher than a recent estimate of national screening practices by Bruhn and colleagues [17], the implication is that over 80% of Massachusetts schools do no form of systematic mental health screening. Though different in specifics (e.g., frequency), generally, similarities to national trends were found. For example, most school-based screening used comprehensive, publish rating scales. The remainder used tools screening tools that are available for free or at low cost and have a narrower foci on depression and/or suicide risk. Similarly, disciplinary referrals and attendance were other data used to identify students at-risk for mental health concerns. Different from national trends, some Massachusetts schools also consider academic achievement difficulties/poor/lowered grades and visits to the nurse relative to potential mental health concerns.

Half of respondents reported that data regarding risk or documented mental health concerns was not systematically gathered or maintained for students in general education (i.e., who did not services or accommodations for mental health concerns via IEPs or 504 plans). For the half that reporting some form of data collection, the process varied from paper notebooks and personal counseling notes to limited access laptops, tablets and cloud-based data storage. In terms of title or role, the mental health personnel responsible for data collection and monitoring varied widely across schools.

The availability of monetary-reliant or human-provided resources to support students was identified as the number one factor which could facilitate or inhibit mental health RTI in Massachusetts schools. Second was communication patterns among school-based personnel. These were consistent with national and state policy recommendation and frameworks to develop safe and supportive schools. Varied training and expertise among school-based personnel and leadership patterns rounded out the list of identified drivers and barriers.

These preliminary findings are somewhat encouraging in that schools not only recognize the need for but are taking steps to establish mental health RTI and can identify local facilitators and barriers to that process. That said, these results underscore the sobering fact that we have a long way to go.

The logical first step in the next phase of determining best practices in providing mental health RTI seems to be further exploration of current practices. This would begin with identifying how the progress of students receiving services and accommodations for mental health concerns through 504 and IEPs is monitored due to the mandatory nature of the monitoring. This would include identifying the data, and how it is collected, analyzed, recorded, reported and communicated across time and setting.

Given the potential for yet to be discovered options, the recommended second step is to determine how the different mental health risk factors are recorded, monitored and communicated across time and setting. Third, case studies of settings that are planning for or enacting complete or partial RTI models is recommended to identify processes and their potential generalizability. Finally, given the great potential value to a multitude of school-settings, it is recommended that these case studies inquiry into strategies to leverage and increase facilitators, as well as decrease and circumvent barriers to their local mental health RTI models.

6. Limitations

Sample size and characteristics likely limit the generalizability of some but not all current and potential future findings. The sample size was small and comprised of members of only one profession in one state. Early and very early career professionals were overrepresented. Target schools were less ethnically and racially diverse than those across the state. Elementary schools were overrepresented.

7. Acknowledgement

8. References

[1] National Alliance of Mental Illness (NAMI, 2013). Mental illness facts and numbers. Retrieved from: http://www2.nami.org/ factsheets/mentalillness_factsheet.pdf

[2] Centers for Disease Control and Prevention. (2013) *Mental Health Surveillance among Children-United States 2005-2011*. MMWR 2013;62 (Suppl. May 16, 2013):1-35. Retrieved from: https://www.cdc.gov/mmwr/preview/ mmwrhtml/su6202a1.htm

[3] Glowinski, A.L. & D'Amelio, D. (2016). Depression Is a Deadly Growing Threat to Our Youth: Time to Rally. *Pediatrics 138*(6). http://pediatrics.aappublications.org/content/pedi atrics/early/2016/11/10/peds.2016-2869.full.pdf

[4] National Association of School Psychologists (NASP, 2015). School psychologists: Qualified health professionals providing child and adolescent mental and behavioral health services. *Communique*, *44*(1), 1, 24-25.

[5] Cheung, A.H., Dewa, C.S., Cairney, J., Veldhuizen, S., & Schaffer, A. 2009. Factors associated with use of mental health services for depressed and/or suicidal youth. *Journal of Community Mental Health*, 45, 300-306.

[6] Clemens, E.V., Welfare, L.E. & Williams, A.M. (2011). Elements of successful school reentry after psychiatric hospitalization. *Preventing School Failure, 55*(4), 202-213. DOI: 10.1080/1045988X.2010.532521

[7] Massachusetts Department of Elementary and Secondary Education (2011). Massachusetts Tiered System of Supports. http://www.doe.mass.edu/ sped/mtss.html

[8] Behavioral Health and Public Schools Task Force (2011). Creating safe, healthy, and supportive learning environments to increase success for all students: Final Report. Malden, MA: Author.

[9] Cowan, K.C., Vaillancourt, K., Rossen, E., & Pollitt, K. (2013). *A Framework for Safe and Supportive Schools* [Brief]. Bethesda, MD: National Association of School Psychologists.

[10] Sugai, G. & Horner, R.H. (2009). Responsiveness-to-intervention and school-wide positive behavior supports: Integration of multi-tiered system approaches. *Exceptionality, 17*(4), 223-237.

[11] Edmonds, R.Z. (2017) *Ask the Experts: MTSS and RTI are often used interchangeably: What is it that separates them?* Washington, DC: Center on Response to Intervention at the American Institutes of Research.

[11] RTI Action Network (2017). What is RTI? New York: National Center for LD. http://www.rtinetwork.org/learn/what/whatisrti

[13] Castillo, J.M. (2014). Best practices in program evaluation in a model of response to intervention/multi-tiered system of supports. In P.L. Harrison & A. Thomas (Eds.), *Best practices in school psychology: System-level services*.

[14] VanDerHeyden A.M., Witt J.C., & Barnett D.W. (2005). The emergence and possible futures of response to intervention. *Journal of Psychoeducational Assessment*. *23*:339–361.

[15] Barnes, A.C., & Harlacher, J.E. (2008). Clearing the confusion: Response-to-intervention as a set of principles. *Education and Treatment of Children, 31*, 417-431.

[16] Fuchs, D., & Fuchs, L.S. (2006). Introduction to responsiveness to intervention: What, why and how valid is it? *Reading Research Quarterly, 41*, 92-99. DOI: 10.1598/RRQ.41.1.4

[17] Bruhn, A.L., Woods-Groves, S., & Huddle, S. (2014). A preliminary investigation of emotional and behavioral screening practices in K-12 schools. *Education and Treatment of Children, 37*(4), 611-634. DOI: 10.1353/etc.2014.0039

[18] Burns, M.K., Riley-Tilman, T.C., & VanDerHeyden, A.M. (2012). *RTI Applications Volume 1: Academic and Behavioral Interventions.* New York: Guilford.

[19] Stormont, M., Reinke, W.M., Herman, K.C. & Lembke, E.S. (2012). *Academic and Behavior Supports for At-Risk Students: Tier 2 Interventions.* New York: Guilford.

[20] Willis, J. (2017, September 7). Question on MTSS/RTI data. [Electronic mailing list message] http://groups.yahoo.com/group/School -Psychology-Listserv

[21] Levy, B. (2017, August 9). Record Keeping. [Electronic mailing list message] http://groups.yahoo.com/group/School-Psycho-logy-Listserv

[22] Massachusetts Department of Elementary and Secondary Education (2005). Education Laws and Regulations. Student records: Questions, answers and guidelines. Retrieved from http://www.doe.mass.edu/lawsregs/ advisory/cmr23qanda.html?section=other

[23] National Research Council and Institute of Medicine. (2009). *Preventing mental, emotional, and behavioral disorders among young people: Progress and possibilities*. Washington, DC: The National Academies Press. http://dhss.alas-ka.gov/dbh/Documents/Prevention/programs/spf sig/pdfs/IOM_Matrix_8%205x11_FINAL.pdf