

JCPS Mental Health Services

Longitudinal Analysis of Attendance and Behavior Outcomes

SUMMARY OF FINDINGS

The longitudinal analysis investigated the attendance and behavioral impact associated with students having sessions with mental health counselors (MHC) or a Social Services Support Worker (SSSW). Using a repeated measures general linear model, the impact of MHC sessions was assessed over three semesters. The findings suggest students reduce total absences by 25-50% over a year, depending on the number of semesters they have received services. On average, students show a decline of suspension occurrences by 50-75% over three semesters. Further, students showed a 33-50% average reduction of discipline referrals over three semesters. Implications of these findings are discussed.

ABOUT THE STUDY

Understanding the impact of mental health professionals on student outcomes is difficult due to potential effects not manifesting quickly, but rather over some time. Research studies have suggested longitudinal studies in an educational setting be measured by at least three semesters of data to assess any potential impact. This study aimed to understand student progress over multiple semesters (or years), related to attendance and discipline, for those students who have consistently attended sessions with a mental health professional in a JCPS school setting.

This study used three separate cohorts to determine impact and effect over time. Each cohort was designed for students who received services for consecutive semesters. The defined groups are described in Table 1. Schools included in this study are listed below. However, not all of these schools have a full-time mental health counselor. These schools may have been served by the crisis response team or at the request for acute services by a school administrator.

Table 1: Defined Cohorts

| Cohort | Semester 1 | Semester 2 | Semester 3 |
|--------|--|-------------|-------------|
| 1 | Fall 2016 | Spring 2017 | Fall 2017 |
| 2 | Spring 2018 | Fall 2018 | Spring 2019 |
| 3 | Students who received services all six semesters listed above. | | |

Table 2: List of schools where students were served.

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|---------------------------|---------------------------|----------------------------------|
| Ackerly | Ballard High | Breckinridge Metropolitan High |
| Alex R Kennedy Elementary | Barret Traditional Middle | Breckinridge-Franklin Elementary |
| Atherton High | Binet School | Brooklawn |
| Atkinson Academy | Blake Elementary | Butler Traditional High |
| Auburndale Elementary | Blue Lick Elementary | |
| | Brandeis Elementary | |

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| Byck Elementary |
| Camp Taylor Elementary |
| Cane Run Elementary |
| Carrithers Middle |
| Central High Magnet Career Academy |
| Chancey Elementary |
| Cochran Elementary |
| Cochrane Elementary |
| Coleridge-Taylor Montessori Elementary |
| Conway Middle |
| Coral Ridge Elementary |
| Crosby Middle |
| Crums Lane Elementary |
| Dixie Elementary |
| Doss High |
| Eastern High |
| Eisenhower Elementary |
| Engelhard Elementary |
| ESL Newcomer Academy |
| Fairdale High |
| Farnsley Middle |
| Fern Creek High |
| Field Elementary |
| Foster Traditional Academy |
| Frayser Elementary |
| Frederick Law Olmsted Academy North |
| Frederick Law Olmsted Academy South |
| Georgia Chaffee Teenage Parent Program |
| Gilmore Lane Elementary |
| Greathouse/Shryock Traditional |
| Greenwood Elementary |
| Gutermuth Elementary |
| Hartstern Elementary |
| Highland Middle |
| Home Of The Innocents School |

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| Indian Trail Elementary |
| Iroquois High |
| Jacob Elementary |
| Jefferson County High |
| Jefferson County Traditional Middle |
| Jeffersontown Elementary |
| Jeffersontown High |
| Johnson Traditional Middle |
| Johnsontown Road Elementary |
| Kammerer Middle |
| Kennedy Montessori Elementary |
| Kerrick Elementary |
| King Elementary |
| Klondike Lane Elementary |
| Knight Middle |
| Lassiter Middle |
| Laukhuf Elementary |
| Liberty High |
| Lincoln Elementary Performing Arts |
| Louisville Day |
| Luhr Elementary |
| Marion C. Moore School |
| Mary Ryan Academy |
| Maupin Elementary |
| McFerran Preparatory Academy |
| Medora Elementary |
| Meyzeek Middle |
| Middletown Elementary |
| Mill Creek Elementary |
| Minor Daniels Academy |
| Minors Lane Elementary |
| Newburg Middle |
| Noe Middle |
| Peace Academy |
| Pleasure Ridge Park High |
| Portland Elementary |

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|---------------------------------------|
| Price Elementary |
| Ramsey Middle |
| Robert Frost Sixth-Grade Academy |
| Roosevelt-Perry Elementary |
| Rutherford Elementary |
| Semple Elementary |
| Seneca High |
| Shacklette Elementary |
| Shelby Traditional Academy |
| Slaughter Elementary |
| Smyrna Elementary |
| Southern High |
| Stonestreet Elementary |
| Stuart Academy |
| The Academy @ Shawnee |
| The Brook-Dupont |
| The Phoenix School Of Discovery |
| Thomas Jefferson Middle |
| Tully Elementary |
| Valley High |
| W.E.B. DuBois Academy |
| Waggener High |
| Waller-Williams Environmental |
| Watterson Elementary |
| Wellington Elementary |
| Western Day Treatment |
| Western High |
| Western Middle School for the Arts |
| Westport Middle |
| Westport TAPP |
| Wheatley Elementary |
| Wilkerson Elementary School |
| Young Elementary |
| Zachary Taylor Elementary |

ABOUT THE DATA

Attendance and behavior outcomes were selected as appropriate indicators for student progress. These indicators stem from mental health professionals' scope of work related to student sense of belonging, student sense of engagement, student self-efficacy, and student discipline issues. Initially, no correlation was found between the number of sessions and attendance or behavior issues. Meaning, a student was not seen more often because of increased behavior or attendance issues. The baseline data (from the semester prior to receiving services) showed no difference among students and dosage amounts.

Attendance and discipline data reported in Infinite Campus were extracted for each defined cohort. Data applying to students receiving services from a JCPS MHC or SSSW for each cohort were included in the data set. Official attendance data incorporated any unexcused absence, excused absence, total absences, and the number of suspended days. Reported discipline data generated the number of occurrences a student was suspended and the number of referrals a student received.

STUDENT SAMPLE

Cohort students in this study attended at least one session with an MHC or SSSW per semester. The following descriptive tables outline the sample further.

Table 3: Cohort Sample Size

| Cohorts | Number of Students |
|------------|--------------------|
| Cohort 1 | 184 |
| Elementary | 62 |
| Middle | 49 |
| High | 73 |
| Cohort 2 | 771 |
| Elementary | 406 |
| Middle | 137 |
| High | 228 |
| Cohort 3 | 347 |
| Elementary | 155 |
| Middle | 89 |
| High | 103 |

Table 4: Average Number of Sessions

| Cohorts | Average Sessions per Student |
|------------|------------------------------|
| Cohort 1 | 20.2 |
| Elementary | 23.3 |
| Middle | 18.8 |
| High | 18.6 |
| Cohort 2 | 10.7 |
| Elementary | 13.8 |
| Middle | 9.3 |
| High | 9.4 |
| Cohort 3 | 37.3 |
| Elementary | 44.1 |
| Middle | 33.2 |
| High | 30.7 |

APPROACH

For each cohort, the impact could be assessed by conducting repeated measures general linear models. The models in this study controlled for various student indicators, including gender, race, and socioeconomic status (FRL).

To determine any differences, the factors in the first model included each type of absence: unexcused, excused, and total absences. The elements in the second model included suspension occurrences, suspension days, and total referrals. Both of these models were conducted for each cohort and each type of school level to highlight any differences between cohorts and between elementary, middle, and high schools.

RESULTS

Among the cohorts, cohort 3 had the most dramatic and significant effect on student attendance and behavior outcomes. Cohort 3 included students who received services for six consecutive semesters. The figures below show the trend for each cohort over the last three semesters. In these tables, it is essential to note that cohort 1 students did not receive any services in the semesters shown, but instead, this shows long-term impact. Cohort 2 includes students who began receiving services in Spring 2018 and continued through Spring 2019. Cohort 3 includes students who received services for the past six semesters and were not included in Cohort 1 calculations. Each figure has a table describing the average change between semesters among students in each cohort. For instance, Figure 1 shows a 4-day decline in total absences from Spring 2018 to Fall 2018 for cohort 3 and another 1.5-day drop from Fall 2018 to Spring 2019.

Of interest, differences were found among white and non-white student outcomes from seeing mental health practitioners. Non-white students exhibited a significant decline in total absences (among all

cohorts), compared to white students. However, white students (among all cohorts) showed decreases in suspension occurrences, suspension days, and total referrals when compared to non-white students. Additional analysis was conducted to determine if the number of sessions affected the variables listed in figures 1-9. There was a significant and small effect of more sessions reducing suspension occurrences ($r=.17$), suspensions days ($r=.12$), and total referrals ($r=.19$). There was not an observed effect or relationship between increased sessions and any type of absence, meaning, having at least one session can lead to change in a student's attendance.

Figure 1:

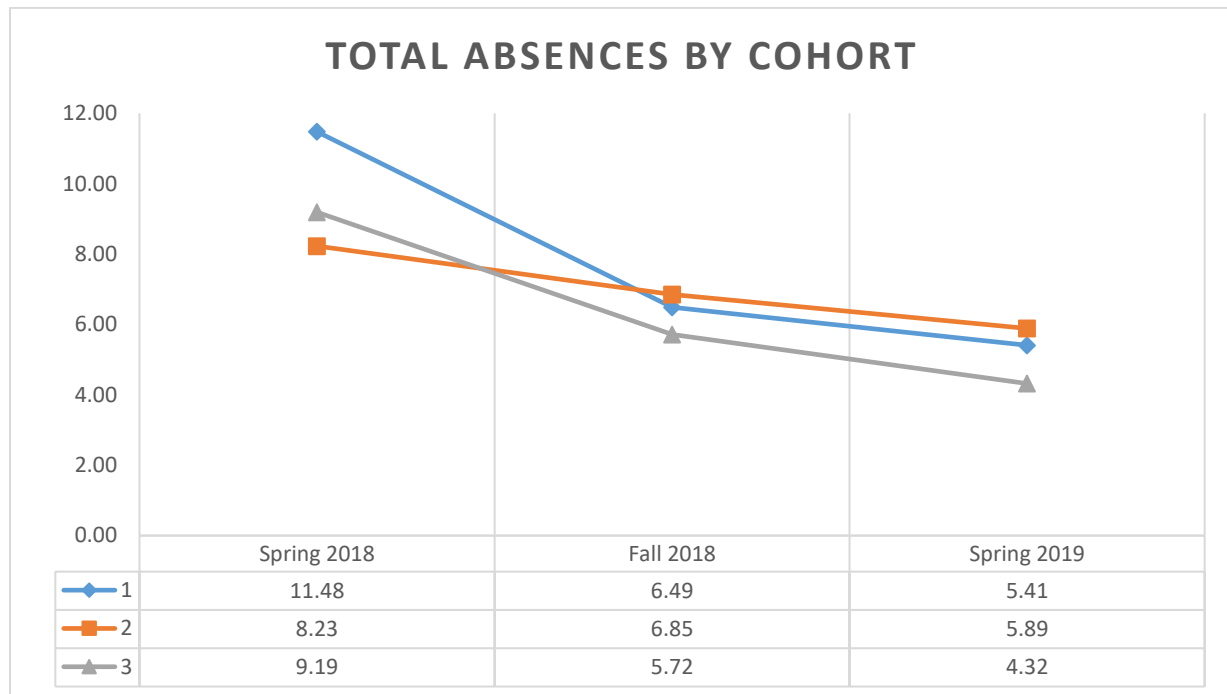


Figure 2:

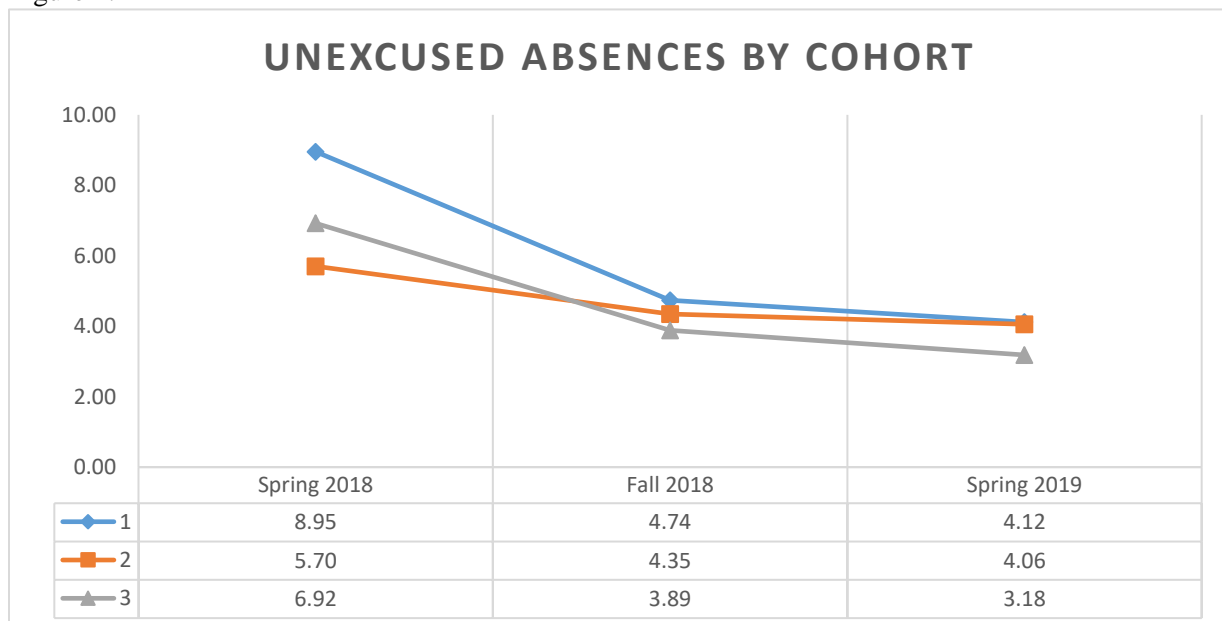


Figure 3:

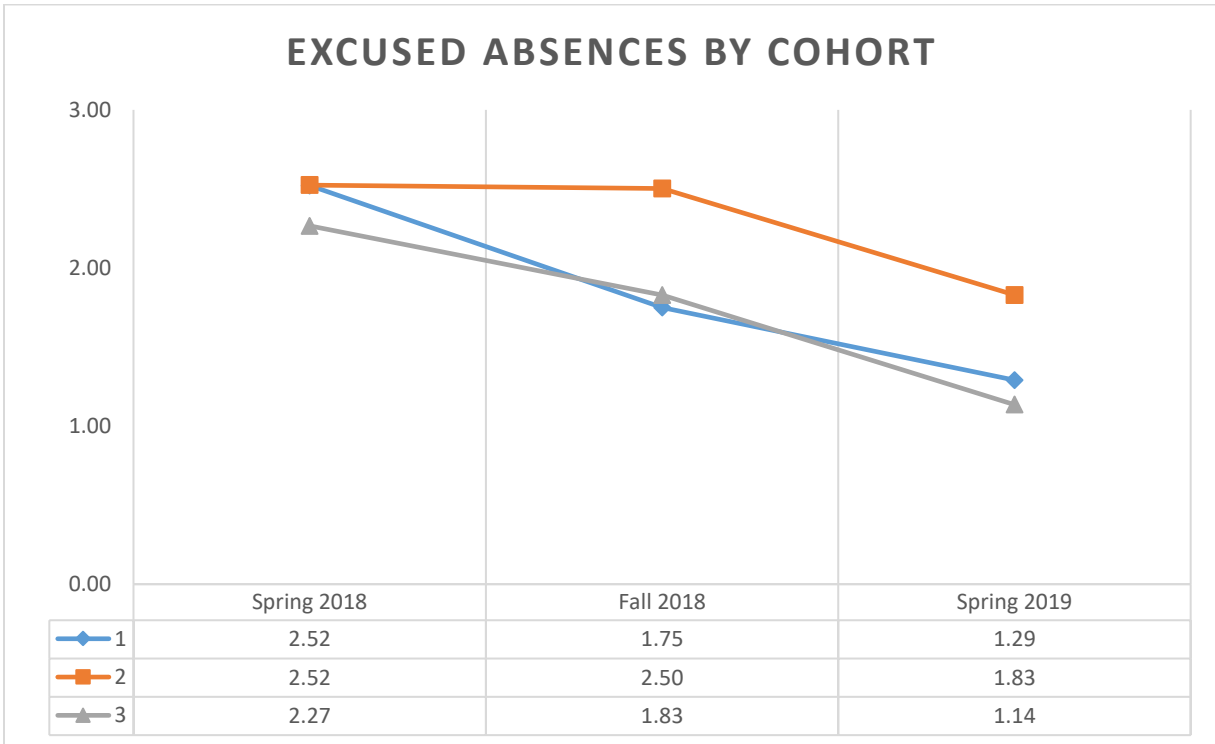


Figure 4:

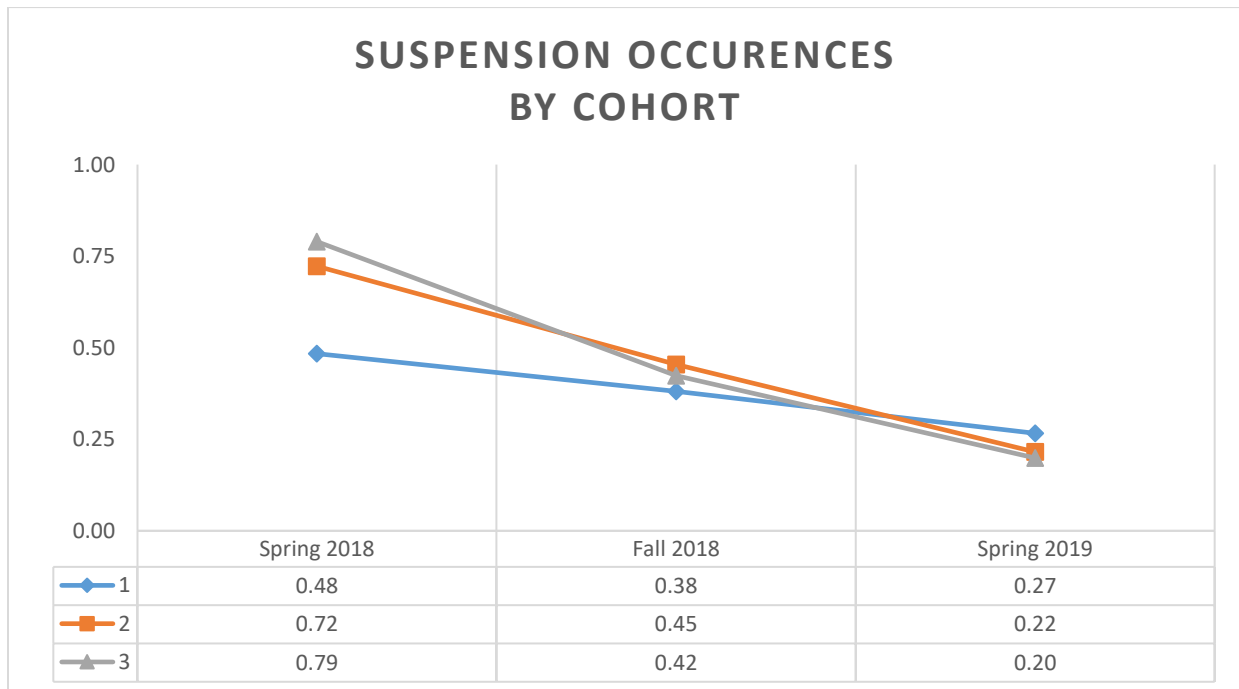


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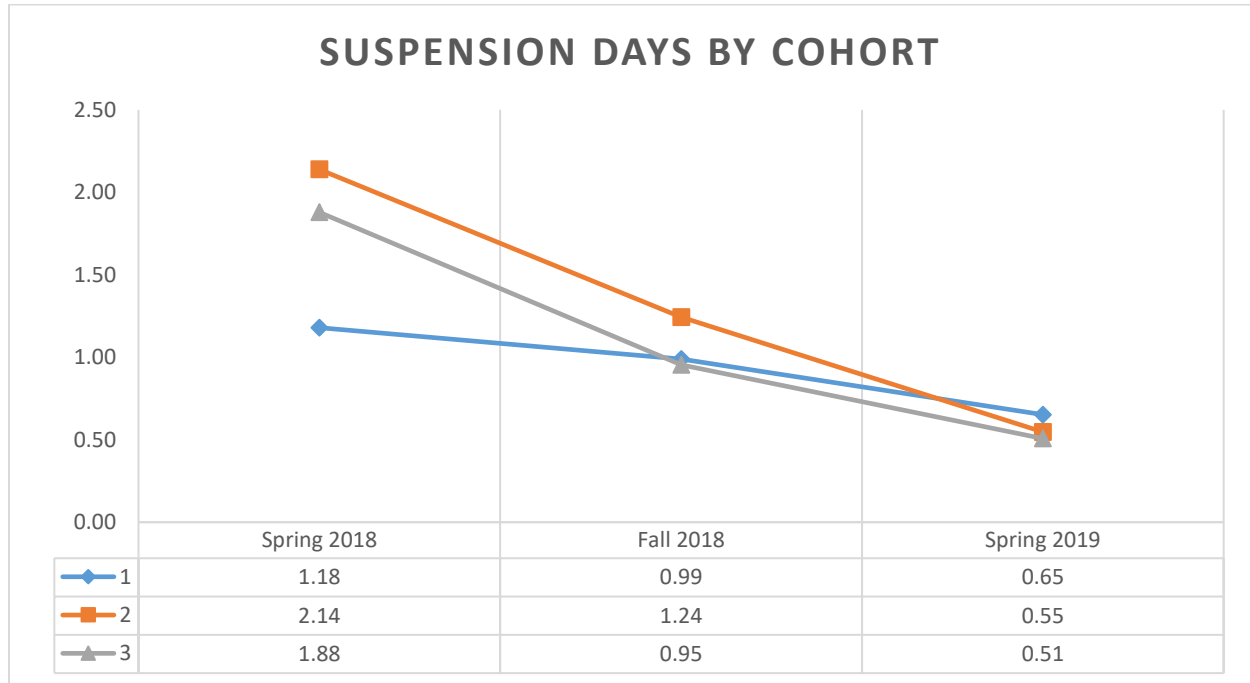


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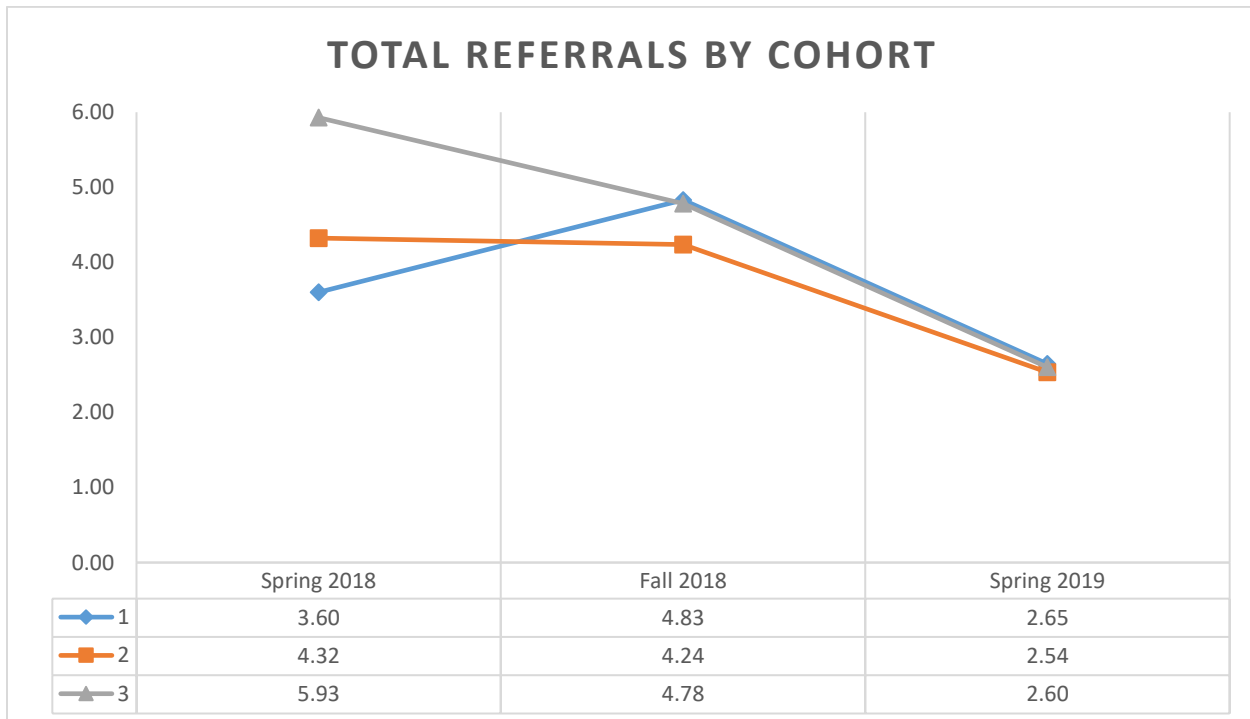


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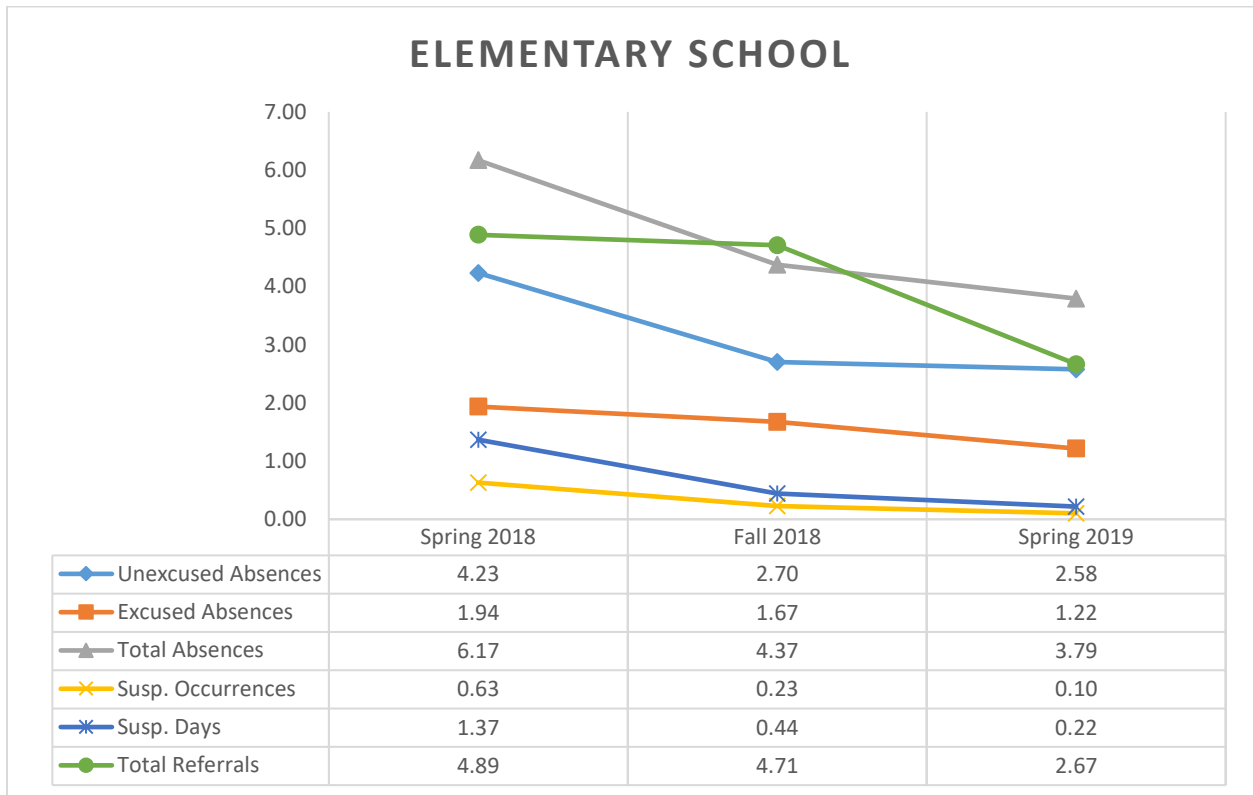


Figure 8:

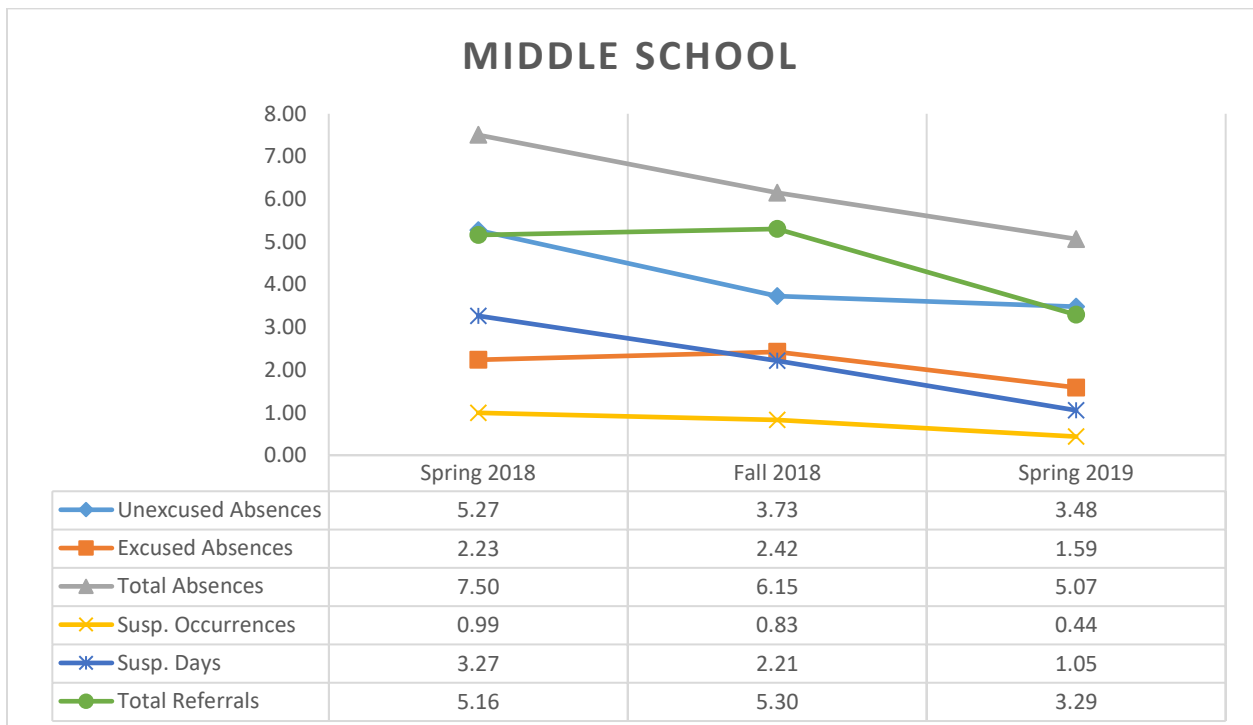
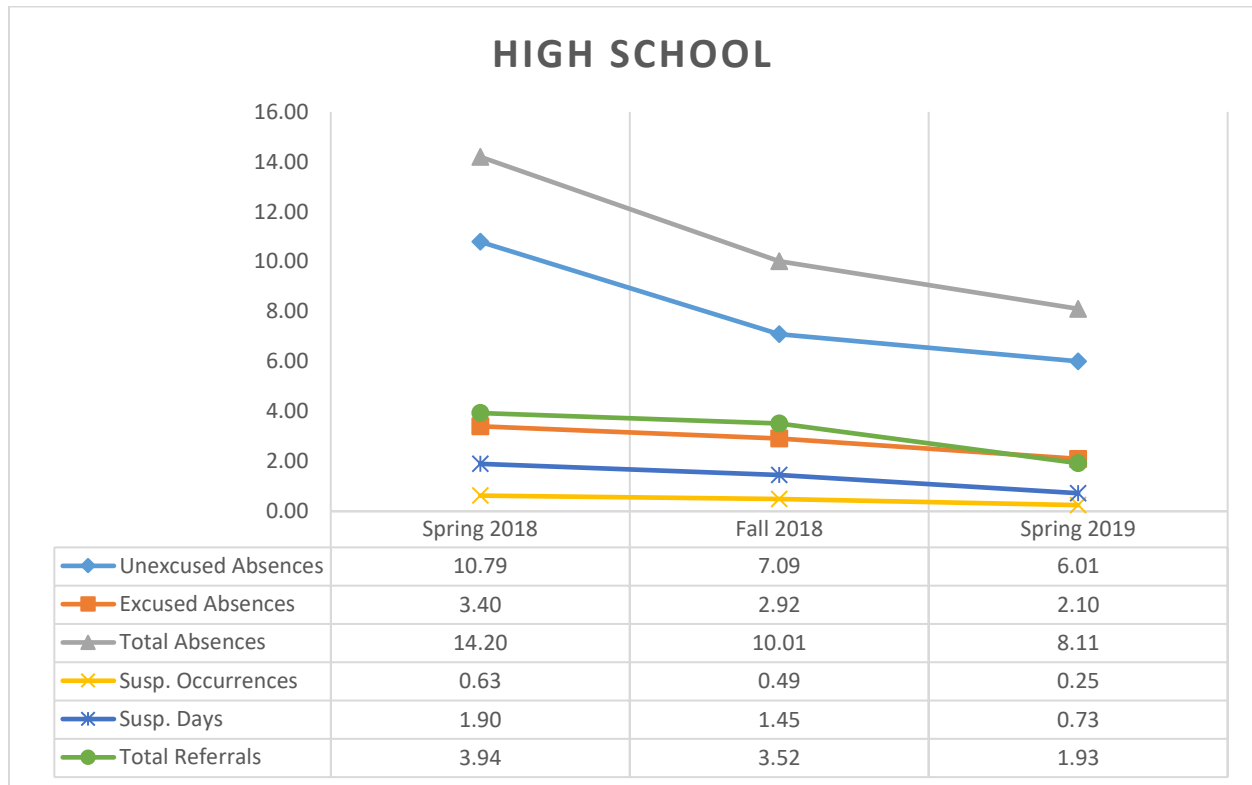


Figure 9:



IMPLICATIONS

Mental health issues affect each individual in some capacity. JCPS employed mental health counselors and Social Services Support Workers to target school-level assistance for students needing help navigating problems that may arise. The following implications could further student impact throughout the district.

1. **Further identification** of students with attendance issues could lead to improved outcomes over time. Schools already track students with attendance problems, but possibly connecting these students with mental health professionals could lead to significant reductions among chronically absent students.
2. **Monitoring fidelity of implementation** could lead to further impact. School personnel can be asked to do a variety of tasks ranging from teaching, creating engagement opportunities, supporting students, and monitoring hallways or cafeterias. Given the nature of targeted mental health services and interventions, personnel assigned to these roles should have minimal extra duties to be effective with students. For MHC and SSSW, allocating significant time to interventions for students is showing evidence of greater effectiveness over monitoring cafeterias.

3. **Utilizing appropriate documentation** will enable district personnel to understand the scope and magnitude of services to students. Increasing the usage of logs will provide more definitive evidence to assess the overall and long-term impact of mental health professionals in the district.
4. **The optimal caseload** for a MHC or SSSW is between 20 and 25 students, according to research. The caseload consists regularly scheduled sessions, while acknowledging the need to see additional students on an as-needed basis or for crisis situations.
5. **Further delineation of services** provided by MHC and SSSW will be examined in the future.