# Formal Management Referrals Compared to Self-Referrals to Counseling from an External Employee Assistance Program (EAP) in the United States 2017-2023: Profiles of User Characteristics and Work and Clinical Outcomes at Before and After Treatment

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***Abstract*:** This applied naturalistic study examined the background and service use characteristics and also the work and clinical outcomes of employees who were formally referred by their employer to use brief counseling services from an employee assistance program (EAP) at CuraLinc Healthcare. The data was from 41,986 employees who worked at over 1,750 different employers located in the United States. The study period spanned 7 years, from January of 2017 through March of 2023. The majority of employees voluntarily used EAP counseling, with about only 3% of the total clients being formally referred to use the EAP by their employer – typically due to issues related to employee job performance or substance abuse. The two types of referral clients (Formal Management Referral or FMR $n$ = 1,215 and Self/Other Referral or SOR $n$ = 40,771) were similar or had only small differences on most of the profile factors. Factors with meaningful differences included the reason why the service was used (i.e., presenting issues of alcohol, drug, work stress and anger management were far more common among formal referrals than SOR; 77% > 13%), the gender of the client (FMR more males; 68% > 38%) and certain industries of the employer. All of the longitudinal test results found improvements in work and health outcomes at 30-days after the use of EAP counseling with large size statistical effects for both referral types, yet the FMR clients tended to have significantly greater relative improvement, which was due in part to their starting out at greater severity levels for work deficits and hazardous alcohol use than self-referral clients. More of the FMR clients were at a problem level at the start of EAP use for both work outcomes and they also had greater improvement afterwards (absence: FMR Pre/Post 46% to 1% > SOR Pre/Post 31% to 7%; productivity FMR Pre/Post 42% to 5% > SOR Pre/Post 35% to 5%). The typical FMR client reduced their average hours of unproductive work time per 30 days by more than the typical SOR client (Pre to Post change: FMR 56 fewer hours > SOR 39 fewer hours). The largest change was from 12.2 to 0.3 hours of absence on average per month for the FMR clients compared to 7.0 to 1.5 hours for the SOR clients. Referral types also differed on certain health risk factors. More of the FMR clients started EAP use at-risk for hazardous alcohol use and also improved more after use (FMR Pre/Post 30% to 5% > SOR Pre/Post 12% to 3%). However, fewer of the FMR clients started EAP use at-risk for mental health (anxiety and/or depression) and yet the FMR clients had greater improvement after counseling (FMR Pre/Post 22% to 3% > SOR Pre/Post 32% to 10%). An important implication of this study is that employers can be confident that when they make a formal management referral of a troubled employee to their EAP that the counseling will likely be successful, both in reducing absence from work and restoring work productivity to normal levels and also in recovering from the clinical problems that are part of the cause of the work-related distress history that likely prompted the referral. Companies that use their EAP for this kind of referral support can likely see results in better risk management of these kinds of common performance and behavioral health issues among their workforce.

***Index Terms***: absenteeism, anxiety, AUDIT-C, depression, employee assistance program, mental health, presenteeism, productivity, PHQ-4, Stanford Presenteeism Scale, Workplace Outcome Suite

## I. Introduction

CuraLinc Healthcare published a study in 2022 of the clinical outcomes (depression and alcohol) and work outcomes (absenteeism and productivity) for over 33,000 employee users of the EAP counseling service during the years 2017 to 2022 [1]. CuraLinc Healthcare also published a second study in 2023 of depression and work outcomes for over 1,000 employees who used the new mental health coaching service during the years 2020 to 2022 [2]. In the present study, we added approximately 8,000 more clients to the project total sample. Now with almost 42,000 clients available to study, we focused on a subset of the counseling users who were formally referred

to the employee assistance program (EAP) by their manager or supervisor at work due to job performance or other significant workplace concerns. These clients are called formal management referrals (FMR). These kinds of clients were directly compared in empirical tests against the much larger sample of other counseling clients who were self or other kinds of voluntary referrals. All of the clients had EAP use profile data and data for multiple kinds of work and behavioral risk factors during the same 7-year period. This descriptive study is valuable because this kind of EAP user has not received much rigorous attention by researchers in the past, despite the long tradition of EAPs providing this unique kind of specialized support to work organizations.

*1.1 Overview of Employee Assistance Programs (EAPs)*

According to the Employee Assistance Professionals Association [3], an EAP is a "set of professional services specifically designed to improve and/or maintain the productivity and healthy functioning of the workplace (p. 1)." Staffed mostly by masters-level licensed counselors and social workers, EAPs offer assessment and short-term counseling for individual employees who present with a wide range of behavioral health, personal life and work-related issues. The conclusion from many evaluation studies is that counseling from EAPs is generally effective for most employee users in areas of reducing personal and clinical distress and improving work-related outcomes such as absenteeism, presenteeism and productivity [4-10].

*1.2 Formal Management Referral in EAP: Literature Review*

In addition to the self-referrals from the employee themselves, and other sources of referrals by a family member, concerned friend, or even other coworkers [11], most full-service EAPs are designed to also encourage referrals from supervisors at work [12]. Thus, supervisors can be a key resource for workers to go to for assistance with work and personal problems that affect their work [13]. Hopkins [14] found that in general, supervisor intervention with troubled workers was more apt to be of the informal type (e.g., talking with workers, listening, and being supportive) than the formal type (i.e., referring workers to helping resources within the company or community). Nonetheless, some supervisors have been taught by their EAP how to be on the lookout for periodic absences, erratic or substandard job productivity, strained interpersonal relations and behavioral indicators of chronic alcoholism, drug abuse, anxiety, depression or other psychological disorders that can adversely impact work performance and workplace culture [15,16]. The usefulness of supervisory referrals to the EAP is also part of the Core Technology of the EAP field as originally conceptualized in the late 1980s [17,18]. Much of the original work in this area focused on making referrals for workers with alcohol-related problems [19,20]. Despite the long history of the role of formal management referrals as a part of EAP service to organizations, little empirical research has been done on the supervisory referral of employees to employee assistance programs and much of this literature is from the 1980s and 1990s [21-23]. What has been studied is now reviewed.

Themes from several studies [23-28] have found that the following variables were related to supervisory referrals: (a) greater degree of leadership and management support for the EAP in general, (b) gender of supervisor (more males make referrals), (c) gender of subordinate (more males referred), (d) existence of a supervisor support network (to learn about the success of making referrals from other supervisors), (e) occupational category of the employees supervised (higher risk jobs), (f) less social distance between supervisor and troubled employee, (g) the supervisor having a positive attitude toward their role in referral, and (h) the supervisor's level of knowledge about their EAP and belief that is it effective. The dissertation study by Love [21], found that supervisors who made referrals to the EAP, compared to other non-referring supervisors, were characterized by several factors: older age, responsible for a larger total number of subordinate employees, greater satisfaction with the availability of the EAP, better performance of employees who had used the EAP in the past and upper management support of the EAP in general. Supervisors who made referrals also felt that trainings provided by the EAP had better addressed their needs as managers. This profile is similar to several of the other studies already cited.

Several past studies have also examined the demographic and work context profiles of the employees who get referred by their managers to the EAP for counseling. A 1990 study [29] of a sample of 75 supervisors found that supervisors' decisions whether or not to make a formal referral to the EAP for an employee was linked to four behaviors that characterized problem workers: increased absenteeism, decreased work productivity, acrimoniousness (e.g., irritability with coworkers or customers) and disaffection (e.g., apathy concerning their work in general). Further, these supervisors were more likely to refer employees who exhibited these kinds of behaviors than other workers who did not display such difficulties. Others have also documented that when employees are referred to an EAP by their employer (as compared to self-referral), they are more likely to have deteriorating job performance and experience with alcohol or drug problems [30].

A study published in 1991 examined descriptive profile and outcomes associated with referrals of their employees to an EAP [31]. The sample featured 415 supervisors from seven employer organizations with EAP services available. The employees in the study who received job performance referrals were more likely than the self-referred clients at the EAP to be male and to have substance abuse and occupational problems. Supervisors who had referred employees to an EAP rated the job performance elements of the workers as significantly improved after participating in the counseling. Attendance was the job element rated lowest before EAP services and showed the greatest improvement of all reported job elements. Significant improvements were also found for work behavior/conduct,

quality of work and quantity of work, as well as interpersonal relationships with other employees in the workplace. The EAP counselors involved in treating these referral clients also rated the job performance of the employees as having improved after the use of counseling. Supervisors in the study also rated the EAP counseling services for these referral clients very positively.

We can learn from this small body of research something about what the nature of the supervisors who make referrals, key characteristics of the employees being referred to EAP and the outcomes of the process. But what is largely missing from this literature is evidence from the perspective of the employer user of the EAP who has been referred by their manager. Because almost all of this literature was conducted more than 25 years ago, the use of scientifically validated self-report measures of behavioral health risks and of work performance outcomes has not been used in research to better understand the profile of employees in FMR experience. Thus, the levels of risks and other performance deficits noted in interview studies and surveys of managers have relied more on opinion and personal experience of the supervisors rather than empirical testing of FMR clients compared to non-FMR users of the counseling using well-known instruments now available with normative benchmarks for scoring and interpreting the results. The present study involved three main areas of investigation.

*1.3 Research Questions*

**Theme 1 – Profile of Formal Management Referral (FMR) Clients**

*RQ1*: Of the total employees who use EAP counseling, how many are formal management referrals?

Historically, the vast majority of people using an EAP for counseling are voluntary self-referrals (often in 80% to 90% range; see industry data in 9,10). Thus, we expect that employees formally referred to the EAP by their employer will constitute a very small portion of all of the employees seeking support.

*RQ2*: How do FMR clients compare to other counseling clients in demographic and service use characteristics?

Given the lack of detailed past research on this general question, we only expect differences in some of the profile factors. Employees who are referred to the EAP by their employer could have a greater likelihood of having work-related issues or other kinds of clinical issues that put the work organization at risk. Past evidence shows that male employees are more likely than female employees to have problem levels of alcohol and drug use and to use the EAP for these kinds of issues [9,10,26-31], and thus if these substance-related issue differences emerge, we may also find more males overall among the formal management referral clients than the self-referral clients. We make no predictions for differences by referral type on other demographic and service use factors.

**Theme 2 – Comparison of Work Outcomes**

It could be that managers are making referrals for EAP support when employees are having problems related to job performance, workplace conduct, employment policy violations, increased absenteeism or decreased productivity. Given that missing work is easier for a manager to observe and track over time than is the productivity level of an employee while at work, it could be that employees with absence problems are more likely among the FMR clients than among the self-referral clients. The rates of having work presenteeism problems in the two referral groups is unknown, but could also be more likely among the FMR clients than among the self-referral clients. We collected self-report data at both before and after counseling on work outcomes of absenteeism and presenteeism to answer the following questions:

*RQ3*: Does the typical FMR client differ from the typical self-referral in the starting levels of work outcomes and then also in the extent of improvement at the follow-up after use of counseling in the hours of lost work productivity (absenteeism, presenteeism and combined total; i.e., do FMR clients have greater improvement in work)?

*RQ4*: Do FMR clients and self-referral clients differ in how many of each group who start their use of the EAP categorized as having a problem level (at-risk status) of work absenteeism or work presenteeism improve enough at the follow-up after use of the EAP to no longer have this problem (i.e., if at-risk for work problems, do more FMR clients recover)?

**Theme 3 – Comparison of Behavioral Health Outcomes**

It could be that managers are making referrals for certain employees to get EAP support when they are having problems with their mental health or substance use that are adversely affecting their own work performance or other dynamics of the workplace. We collected self-report data at before and after counseling on behavioral outcomes of hazardous alcohol use and the mental health disorders of anxiety and depression to answer the following questions:

*RQ5 – Total Sample – Risk Status*: Do FMR clients and self-referral clients differ in how many of each group are categorized as having a clinical level (at-risk status) of hazardous alcohol use or mental health disorders before starting use of the EAP? (i.e., are more of the FMR clients initially at-risk for behavioral health disorders)?

*RQ6 – Longitudinal Sample – Reduction of Risk*: Do FMR clients and self-referral clients differ in how many of each group who start their use of the EAP categorized as at-risk status for alcohol or mental health disorders improve enough in their symptoms at the follow-up after use of the EAP to no longer have this problem (i.e., do more of the FMR clients recover after use on health risks)?

## II. Methodology

### *2.1 About the Service Provider*

CuraLinc Healthcare is a global external vendor of EAP services, based in the United States. In business since 2008, it has over 3,700 employer customers that offer the EAP as a benefit to over 6.5 million employees. This company specializes in delivering transformative workforce mental health programs by marrying technology and personalized advocacy to engage, empower and support employees throughout their care journey. Users were made aware of the service as a benefit open to all covered employees through a variety of digital, interpersonal and workplace promotional practices. As part of its ongoing business practices, this EAP routinely collects several kinds of data relevant to assessing the outcomes of the services.

### *2.2 Archival Real-World Use Data*

The total sample included 41,986 employees. These employees worked at over 1,750 different employers located in the United States. The study period spanned seven years, from January of 2017 through March of 2023, based on the start date of the first session of program use. For this study, we extracted the following information from the operational data system: name of employer/customer, maximum counseling sessions allowed per issue in the employer/customer contract, date of first use of the service, date of follow-up survey, employee age, employee gender, primary issue presented at the start of counseling (ex., alcohol, anxiety, marriage, work, etc.), and the modality (how the counseling was delivered). Critical to this study was that the EAP also noted for every user the source of referral to the EAP. This was defined as being either a formal referral from management at the organization where the employee worked or else other kinds of voluntary referrals (i.e., self-referral, referral from a friend, family member or other source). The latter group was labelled as the self/other referral (SOR) group. The raw data was aggregated into one master dataset and analyzed for the present paper. As this was an applied study of archival anonymized data collected from routine use of the service, collecting additional informed consent to participate in research from individual participants was not required beyond what was in their initial consent agreement for terms of service use. Project approval from a university internal review board was not required. The use and analysis of archival operational data in this manner for applied research is consistent with the published ethical guidelines of the American Psychological Association [32]. The real-world conditions for this study are similar to other applied studies published in peer-review journals that have examined the effectiveness of commercial mental health support programs [8,33-39].

### *2.3 Client Privacy*

The privacy of users of the EAP was protected by having all program use and survey data de-identified before being shared with the independent consultant (first author) who conducted all analyses. All data was collected as part of the normal business practices and not for a separate specific research project. There was no direct cost to the employees in this study, as access to the EAP was sponsored by their employer. Employees participated voluntarily and were not paid for being in the research study.

### *2.4 Client Intake, Counseling Intervention and Follow-up*

Employees accessed the EAP in a variety of ways, most commonly by calling in to the service and talking on the telephone with a licensed mental health professional, or by self-scheduling an initial session online. The modality of how the counseling was delivered included several options engaged by the preference of the user: Face to face in-person at the counselor's office (67%) or an office located onsite at the workplace (3%); online video (28%); or other technology channels (2%). Most users were females (62%; males 38%). The age of client ranged considerably but averaged about 40 years old. The reason employees gave for why they wanted to use counseling included over 30 different specific kinds of issues. The most common issues for EAP use involved mental health topics (49%), followed by personal stress and work/life issues (21%), marriage and family issues (18%), work-related issues (7%); or substance use involving alcohol, drugs or other addictions (5%). Most clients engaged in counseling over a one to two month period, with the average being 51 days (range 1 to 320; median 45). Participants had a use model determined by their employer that limited the maximum number of counseling sessions allowed per treatment episode. This limit ranged widely from only 3 sessions to unlimited: 3 session limit = 12%; 4 sessions = <1%; 5 sessions = 54%), 6 session limit = <1%; 7 sessions = <1%; 8 sessions = 13%; 9 sessions = <1%; 10 sessions = 4%; 11, 12 or unlimited sessions = 2%). The follow-up after use was completed at approximately 30 days later than the date of the final counseling session. All of these characteristics of how the program was used are presented in more detail later in the paper.

*2.5 Self-report Outcome Measures*

During the initial assessment, the outcome measures were collected, either over the telephone or from a brief online survey. After the treatment phase was completed, the EAP conducted individual follow-ups with clients about 30 days after the last clinical session to collect outcome measures and evaluate other quality of use metrics. Standardized measures of work and health outcomes were assessed using published and validated self-report scales from the scientific literature. The work measures included hours of absenteeism, level of presenteeism and combined hours of lost work productivity. The health measures included symptoms of anxiety, depression and hazardous alcohol use. See Appendix A for details on these measures. All measures had acceptable levels of psychometric reliability.

*2.6 Determination of Valid Clients*

Only employee users of the EAP for counseling were included in this study and therefore the experiences of spouses, dependents and retirees of covered employees who used the counseling services were excluded. Users of the EAP for other kinds of services were also excluded (i.e., mental health coaching, trainings, management consultations, group-level crisis event response, educational resources). The minimum criteria for inclusion in the profile test samples at baseline was being categorized as either a FMR or a voluntary referral and having valid data on the specific profile factor examined. The minimum criteria for inclusion in the longitudinal test samples was having the outcome measure of interest collected at both the Pre and Post periods for each employee (which varied by the outcome measure and relevant test conditions). In general, the FMR clients had much higher participation levels at the follow-up after use than did the self/other referral group, but despite the differences in these response rates, both groups of referral types had longitudinal subsamples who accurately represented their full sample at the start of the study (i.e., profiles of the demographics and program use factors, and the initial levels of outcomes at Pre, that were generally similar between the full baseline samples at Pre when compared to the subsamples having longitudinal Pre and Post paired data with each client).

*2.7 Data Analysis Plan*

All analyses were conducted using the Statistical Package for the Social Sciences (SPSS) Version 27. Analyses with categorical variables were conducted with chi-square ($\chi^2$) non-parametric test procedures. The tests of improvement over time (Pre to Post) with the ratings on outcome measures were conducted using a repeated measures analysis of variance procedure (RM-ANOVA). With such a large sample size, the level of statistical power [40] to detect a small size effect in repeated measures tests at $p < .05$ chance level was very high at .99. The general goal was to conduct tests that compared the two groups of the FMR and the self-referral users. As shown later in Part 1 of the results, several of the study context, demographic and EAP use factors were found to differ significantly between the two referral groups. Thus, analyses were also conducted using the factors with differences as covariates in a multivariate test to yield adjusted mean scores or adjusted percentages for each referral type group. However, the statistical effect sizes for the covariates as influencing the referral type group differences on the outcomes tested were all very small or trivial. Thus, adjusting for covariates had little practice difference in the primary results presented in the paper. The two referral type groups had similar comparative findings in tests with or without the covariates of relevant background and EAP use factors.

*2.8 Statistical Power and Effect Sizes*

The findings of the tests conducted were interpreted based on two objectives. The first goal of the study is to simply compare and contrast the FMR and SOR groups of counseling users on many factors available in the very large, national, multi-year data set provided by the EAP. The second goal was to judge the magnitude and practical significance of any differences that were identified. Given the very large samples involved in many of the test, we had extremely high levels of statistical power and thus also the ability to declare even very small differences found as being "significant" at beyond chance levels (i.e., $p < .05$). Thus, we adopted a commonly used interpretative tool within the social sciences of comparing the statistical effect sizes of certain results. Following the findings of the meta-analysis review by Gignac and Szodorai [41] of research results in psychology, we converted various test metrics of effect size (Cohen's *d*, partial eta squared $\eta_p^2$, correlation coefficients) into a standardized correlation coefficient (*r*). We considered *r* of .30 or higher to indicate a large effect, *r* of .20 to .29 a medium size effect, *r* of .10 to .19 as a small size effect, and *r* less than .10 to be very small size or a significant but trivial difference.

## III. Results

**PART 1: Prevalence of Formal Management Referral Clients**

As expected, the vast majority of employees voluntarily use EAP counseling with about only 3% of the total clients during the 7-year study period being formally referred to use the EAP by their manager at work. That is also about 1 in every 36 clients. This rate for FMR clients was consistent across the different years, ranging from 2.0% to 4.7%. However, it was only 0.6% in year 2021 (due to complications in assigning these kinds of clients to the study). See Figure 1 and Table B1 in the Appendix for detailed findings.

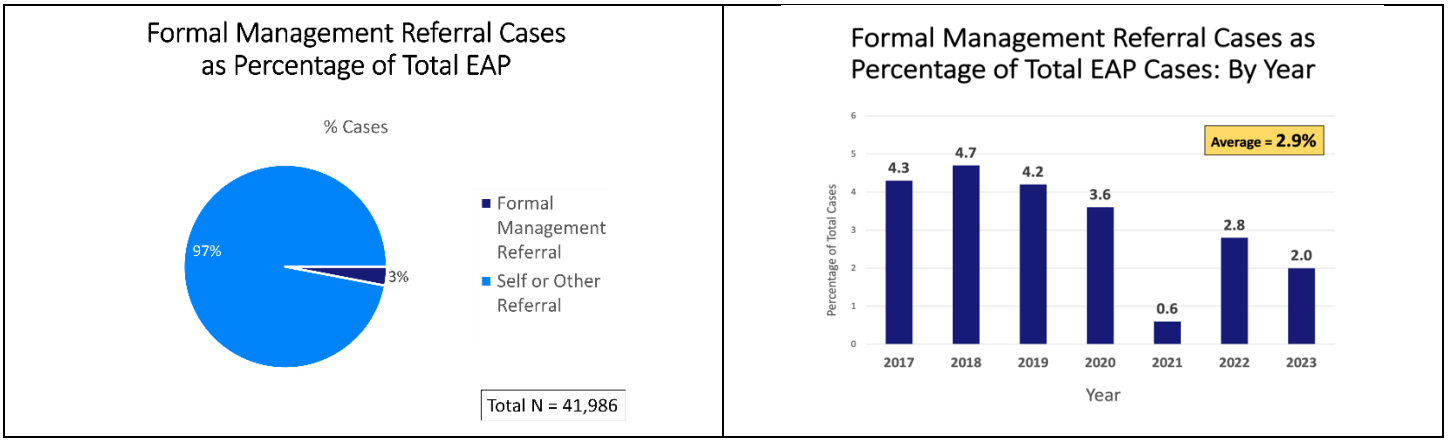


**Figure Set 1.** Prevalence of formal management referral clients in EAP counseling.

## PART 2: Profile of Formal Management Referral Clients

The formal management referral clients were compared to the self/other referral clients on profile factors of the employer context, client demographics and how and why the counseling service was used. The statistical test details for most analyses for the profile factors are presented in Appendix B.

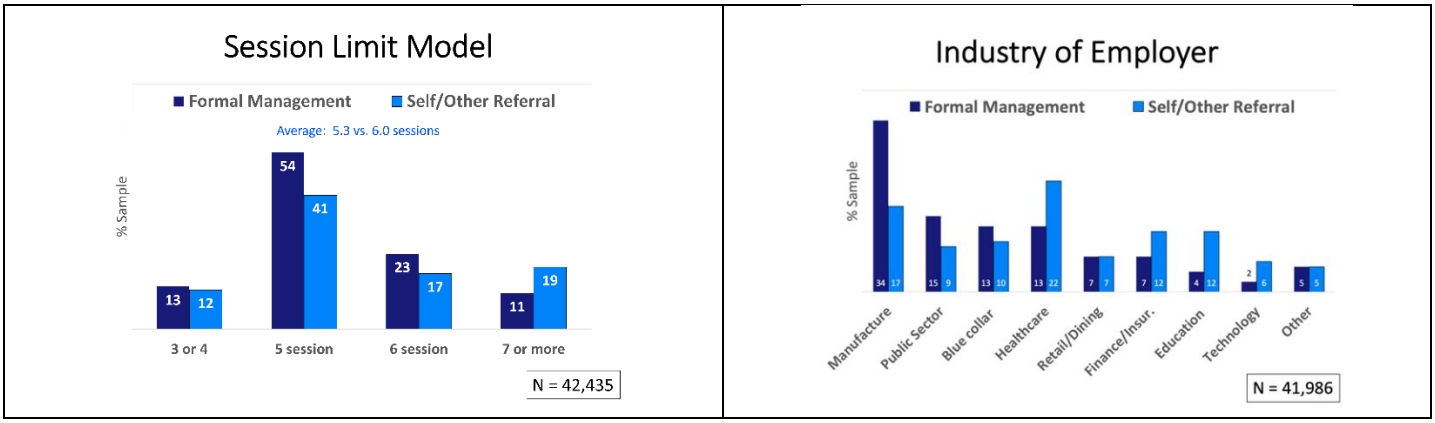


**Figure Set 2.** Comparison of referral types by employer context factors.

Each employer customer contracted with the EAP provider for how many sessions of counseling were allowed per client per issue among the users of the EAP service. This session model can range from 3 sessions to an unlimited number of sessions. The referral types had mostly similar profiles on this factor (see Figure 2), with both types having a 5-session limit as the most common.

The industry of the employer (where the employee worked) had some very small differences by referral type. The details are shown in Figure 2 and Table B2. Overall similarity was demonstrated by all nine industry categories being represented in both referral type groups, but several of the specific industries had larger size differences between referral types than others. Manufacturing was the industry most characteristic of the FMR group, being 34% of this type, which was twice as much as the 17% in the other self/other referral group (a 17% net difference). Healthcare was the industry most common among clients in the self/other referral group, being 32% of this type, which was almost twice as much as the 13% in the formal management referral group (a 9% net difference). Education and Financial/insurance were additional industries that were both about twice as common among the self/other referral group than in the formal management referral group: Education = 12% of self *vs*. 4% of formal; Financial = 12% of self *vs*. 7% of formal. The remaining five industry types were all more equally represented within each referral type group.

Consistent with other data [9,10], there were significant gender differences in the proportion of men and women users of the EAP within each industry category. In the total sample, the percentage of men of the total clients within each industry was as follows: 58% Manufacturing; 52% Blue collar other; 46% Technology; 42% Retail or restaurant; 40% "Other" industries; 36% Financial or insurance

or other white collar; 34% Government or public sector; 28% Education; and 21% Healthcare. However, the rank order of which industries by the percentage of male clients in that industry was quite similar for both referral type groups.

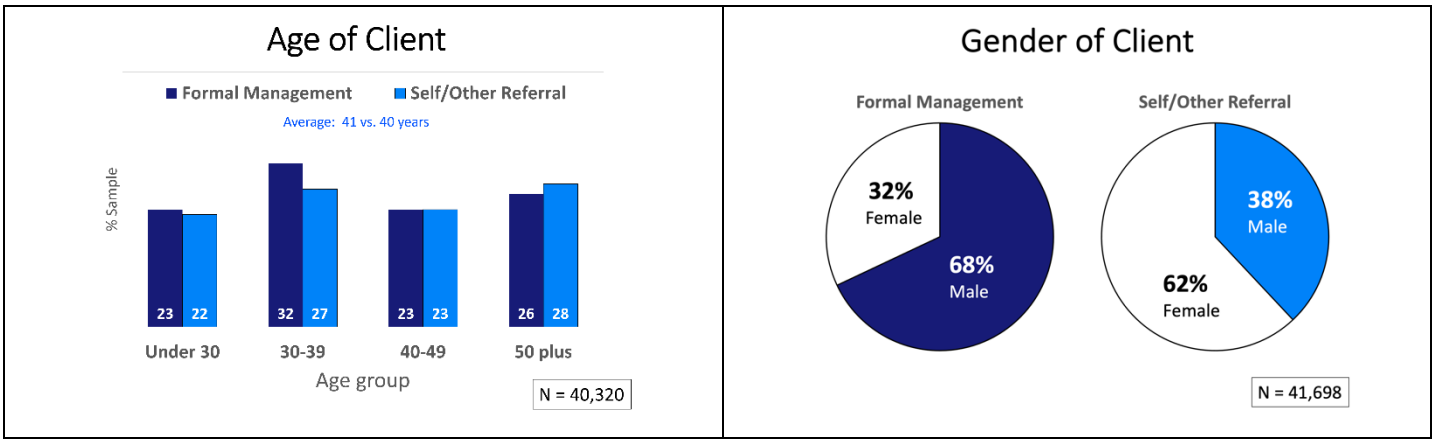


**Figure Set 3.** Comparison of referral types by client demographics.

The referral types were similar on the demographic factor of age of the employee (see Figure 3). Both referral types had a range of age groups represented and the average age was almost the same (i.e., 41 years FMR *vs.* 40 years SOR). The gender mix for the formal management referral clients was 68% male and 32% female, which was almost the opposite of the 38% male and 62% female gender mix of the self-other referral clients.

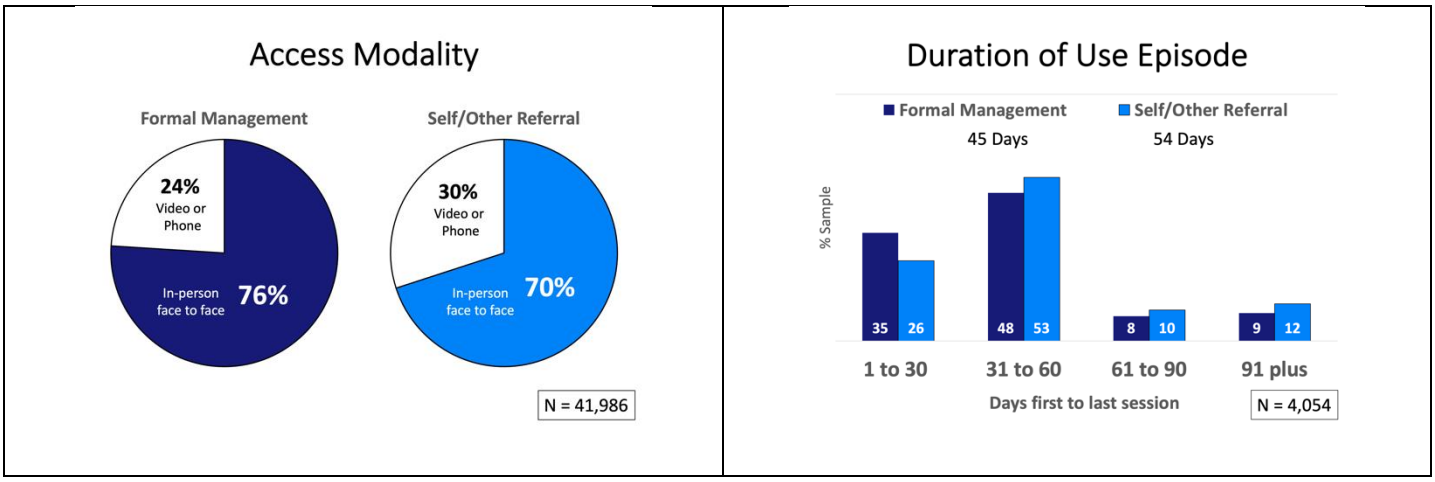


**Figure Set 4.** Comparison of referral types by counseling use factors.

The referral types were similar on how the counseling sessions were delivered to the users and also on how long the treatments lasted (see Figure 4). Over the seven years of data, the majority of both referral types had interacted with the counselor face-to-face in an office setting (FMR 76%; self-referral 70%) with the remaining clients using some form of technology to meet with the counselor (mostly online secure video). Both referral types had a wide range of the duration periods of use although most clients were in the one or two month range. The average FMR client used the EAP for a significantly shorter duration (i.e., 45 days *vs.* 54 days for SOR clients).

The relative proportions of various kinds of presenting issues of why the EAP was used revealed a major difference. See Table B3 and Figure 5. Compared to the SOR group, the formal management referral group had 11 times as many clients with substance use issues (both drug and alcohol combined were 40.4% of FMR group *vs.* only 3.6% of other clients). More specifically, drug issues comprised 20.5% of the clients in the FMR group compared to only 0.7% of clients in the SOR group and alcohol issues comprised 19.9% of clients in the FMR group compared to only 2.9% of clients in the self/other referral group. The formal management referral group had 3.4 times as many clients with work issues (22.6% of clients in the FMR group *vs.* 6.7% of clients in the other group). The formal management referral group had almost 8 times as many clients with anger management issues (13.1% of clients in the FMR group *vs.* 1.7% of clients in the SOR group).

Alternatively, several other kinds of issues were much *less* characteristic of the formal management referral clients. Mental health issues were 3 times less common among FMR clients (14.1% of clients in the FMR group *vs*. 47.9% of clients in the other group). As a set of issues, personal stress and family life issues were 4 times less common among the formal management referral clients (9.7% of clients in the FMR group *vs*. 40.2% of clients in the other group).

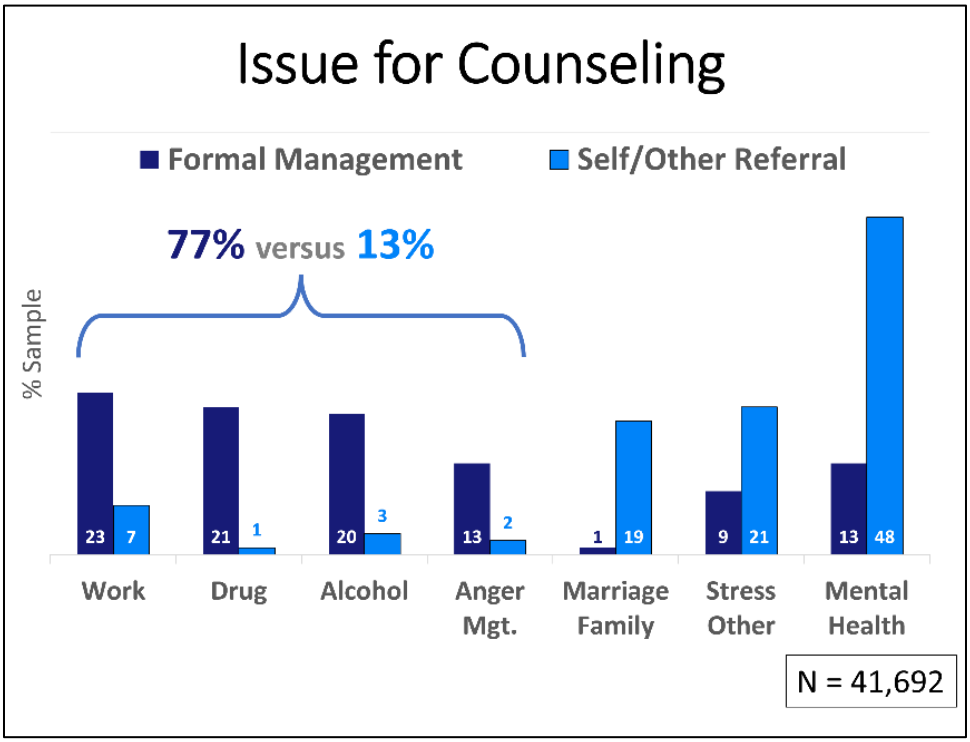


**Figure Set 5.** Comparison of referral types by issue (topic during counseling).

Reasons why the EAP was used was further examined for the balance of men and women within each issue type. This was done separately in each of referral type groups (see Table B4 and Figure 6 for details). As expected, certain issues that are typically dominated by male gender clients among EAP counseling users [9,10,12] was also found in this study when the two referral type groups were examined separately. The vast majority of clients with substance use issues were men in both referral type groups: 74% of alcohol clients in the FMR group were men *vs*. 76% of alcohol clients in the other group were men (2% net difference); and 85% of drug clients in the FMR group were men *vs*. 78% of drug clients in the other group were men (7% net difference). The vast majority of employees with anger management issues were also men in both referral type groups: 81% of clients in the FMR group were men *vs*. 74% of clients in the other group were men (7% net difference). Thus, it appears that the male majority among the total group of formal management referral clients was due in large part to their having far more employees who used the EAP to obtain support for a substance or anger management issue (issues which are mostly men in general regardless of referral type).

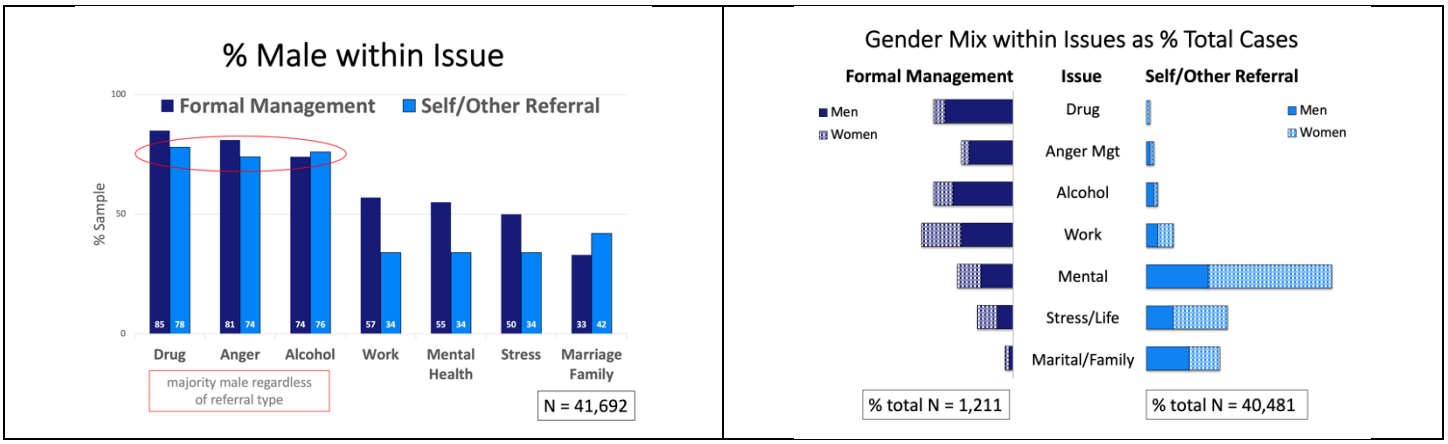


**Figure Set 6.** Comparison of referral types by issue and gender of client.

*Summary of Profile Analyses*

As shown in Table 1, the two types of referral clients were similar or had had only small differences on most of these profile factors. These include the year of service use, the employer specified contract for the maximum number of counseling sessions allowed per client per episode, the age of the client, how the counseling was delivered (i.e., access modality) and how long the counseling episode lasted. Factors with meaningful differences included the reason why the service was used (i.e., presenting issue), the gender of the client (which was linked to certain issues more prevalent in FMR clients with majority males) and to a lesser extent also the industry of the employer (which also was linked to certain industries with historically more males).

**Table 1.** *Summary of Profile Factors Differences by Referral Type*

| Profile factors | Relevant sample size | *r* | Statistical effect size | Comment |
|---|---|---|---|---|
| Year of EAP use | 41,968 | -.06 | very small | |
| Industry of employer | 41,986 | .05 | very small | |
| Session model contract | 41,435 | -.04 | trivial | |
| Modality to access EAP | 41,986 | .02 | trivial | |
| Duration of EAP use | 4,054 | -.08 | very small | |
| Age of client | 40,320 | .02 | trivial | |
| Gender of client | 41,698 | -.11 | **small** | FMR more males |
| Issue – Alcohol or Drug | | .28 | **medium/large** | FMR more |
| Issue – Work Stress | | .10 | **small** | FMR more |
| Issue – Anger management | 41,980 | .13 | **small** | FMR more |
| Issue – Mental health | | -.07 | very small | FMR less |
| Issue – Stress | | -.04 | very small | FMR less |
| Issue – Marriage / Family | | -.07 | very small | FMR less |

*Note*: All findings significant at $p < .001$ but vary by statistical effect size *r*.

**PART 3: Work Outcomes Compared by Referral Type**

The formal management referral clients were compared to the self/other referral clients on the set of work outcomes among EAP users with longitudinal data on these measures. These samples were both from phase 1 of data collection that occurred during the years 2017 to August of 2022.

**3.1 Longitudinal Participation Rate.** Analysis of the clients with both Pre and Post data indicated that a time span of 100 days included 90% of the clients with paired Pre and Post valid data on outcomes (i.e., up to 65 days of treatment and 30 days until the follow-up). Using this 100-day span as a condition to declare a client a Yes or No for participating in the follow-up survey conducted at about 30-days after the final counseling session, the two referral types had very different participation rates. The FMR longitudinal subsample of 617 clients represented 79% of 778 possible relevant clients with Pre data and the Self/Other referral group longitudinal subsample of 2,379 clients represented 10% of the 24,283 possible clients with Pre data. The 1 in 10 general response rate at this EAP company is consistent with most of the other US-based EAP programs and vendors that conduct follow-up surveys according to an industry survey in year 2021 [8-10]. Within each referral type, the Pre only group and the Pre and Post subgroup had very similar profiles of employer, demographic, EAP use factors and also baseline work outcomes average levels. Thus, using statistical controls in the primary analyses for factors related to validity of the longitudinal group status was not necessary. These findings do constitute an interesting difference, though, between the two referral types with the employees who were formally referred to use the EAP having 8 times higher level of engagement in the follow-up assessment process than the other employees who choose to use the service voluntarily. It appears the added role of having their employer require the use of counseling is more motivating to these employees in the FMR group to also do the follow-up data collection process.

**3.2 Improvement for Hours of Work Absenteeism.** The typical FMR client had missed 12.2 hours of work due to absence during the month before starting counseling and only 0.3 hours during the month after completing treatment. This change reflected a 98% reduction in the severity level of lost work time and a net difference of 11.9 hours of work that were restored per month after completing counseling. The typical self/other referral client had missed 7.0 hours of lost work productivity during the month before starting counseling and only 1.5 hours during the month after completing treatment. This change reflected a 79% reduction in the severity level of lost work time and a net difference of 5.5 hours of work that were restored per month after completing counseling. Comparing these results in a RM-ANOVA procedure indicated that even though both groups had substantial improvement, the FMR clients had a significantly better improvement after EAP use concerning work absence, $F(1,2994) = 86.66$, $p < .001$, $r = .17$ small size interaction effect (note: tested with square root transformed version of variable to reduce skew with majority at zero hours). This result for work absenteeism and other absenteeism metrics are shown in Figure Set 7.


**Figure Set 7.** Referral types compared on work absenteeism metrics.

To understand these results, it is helpful to know how much absence is reported by employees in general. Other research on healthy employees indicates about 3 hours per month of work time is lost for health-related reasons [see review in 9]. Thus, the typical employee referred to EAP counseling by his or her manager at work had 4 times the amount of missed work than experienced by the average employee in general.

**3.3 Range in Level of Work Absenteeism.** Employees who were formally referred to use the EAP were distributed across all five levels of the number of hours of missed work at Pre and at Post. The most common outcome was missing zero hours of work and this ideal result almost doubled from the start of use to the follow-up, changing from 45% of clients to 99%, respectively. Employees who use the EAP voluntarily were also distributed across all five levels of the number of hours of missed work at Pre and at Post. The most common outcome was also missing zero hours of work and this best result almost doubled from the start of use to the follow-up, changing from 51% of clients to 92%, respectively. Comparing these results indicated that the FMR clients had a significantly more shifting of

clients from higher to lower levels of absenteeism, $X^2(16,2996) = 145.21$, $p < .001$, $r = .20$ medium size effect. Note that both types of referrals had the vast majority of employees reporting zero absence during the month following their final counseling session (99% of FMR clients and 92% of self/other referral clients).

**3.4 Problem Status for Work Absenteeism.** We also wanted to understand the full story for absence and looked into how the patterns for the clients were distributed across the possible range of hours of missed work. At the start of counseling, 46% of the FMR clients ($n = 281$ of 617) were classified as having an absence problem (i.e., missing more work than the three hours found for a typical "healthy" employee). This outcome changed to be only 1% of the clients at Post ($n = 6$). This change was a significant and very large improvement: $F(1,617) = 488.91$, $p < .001$, $r = .66$. Thus, 98% of the clients with an absence problem initially had recovered after use to no longer have this work problem. At the start of counseling, 31% of self-referral clients employees ($n = 746$ of 2379) were classified as having an absence problem. This outcome changed to be only 7% of the clients at Post ($n = 165$). This change was a significant and very large improvement: $F(1,2378) = 625.88$, $p < .001$, $r = .46$. Thus, 78% of the clients with an absence problem initially had recovered after use to no longer have this work problem. Compared to the voluntary users, the FMR group had more of total clients with work absenteeism problem before use of counseling: 46% *vs*. 31% ($X^2[1,2996] = 43.76$, $p < .001$, $r = .12$ small size effect). The FMR group also improved significantly more after use to have fewer clients with this problem per every 100 clients: 45 clients *vs*. 24 clients ($X^2[1,2996] = 103.73$, $p < .001$, $r = .19$ small size effect). Simply put, more of FMR clients started EAP use at a problem level of work absence and more of this group recovered after use to return to more normal levels of absence that were either very low or no absence at all.

**3.4 Improvement for Work Productivity.** The RM-ANOVA test found that the average score on the productivity scale among the FMR group was 56% higher at the follow-up, changing from $M = 16.81$ (SD = 6.72) at Pre to $M = 26.17$ (SD = 5.62) at Post. This result was significant and a very large size statistical effect: $F(1,616) = 1119.44$, $p < .001$, $r = .80$. A similar longitudinal test found that the average score on the productivity scale among the self/other referral group was 37% higher at the follow-up, changing from $M = 18.11$ (SD = 6.84) at Pre to $M = 24.92$ (SD = 5.40) at Post. This result was also significant and a very large size statistical effect: $F(1,2378) = 2132.91$, $p < .001$, $r = .69$. Comparing these results directly in a RM-ANOVA procedure indicated that even though both groups had substantial improvement, the FMR clients had significantly greater improvement over time than the self/other referral clients in their level of work productivity, $F(1,2994) = 62.33$, $p < .001$, $r = .14$ small size interaction effect. This result for work productivity and other productivity metrics are shown in Figure Set 8.

**3.5 Range in Work Productivity.** Looking deeper into the data beyond the averages revealed that employees who referred to use the EAP were distributed across all five levels of the work productivity scale at Pre and at Post. At the start, most clients were at the medium level of productivity when starting their EAP use (32%), with only about one in every four clients at the high or very high levels (14%; 11%, respectively). Employees who used the EAP voluntarily were also distributed across all five levels of work productivity at Pre and at Post. Most of the voluntary clients at the start were also at the medium level of productivity (29%), with another third of clients at the high or very high levels (24%; 13%, respectively). Comparing these results for the mix of clients at different levels of work productivity at Pre and again at Post indicated that the FMR group had a pattern of shifting more clients to higher levels of productivity after completing counseling than did the self/other referral group, $X^2(16,2996) = 181.18$, $p < .001$, $r = .31$ large size effect.

**3.6 Problem Status for Work Productivity.** At the start of counseling, 42% of the FMR clients ($n = 246$ of 617) were classified as having a productivity problem (i.e., scoring in the low or very low range for this measure). This outcome changed to be only 5% of these clients at Post ($n = 28$). This change was significant and a very large effect: $F(1,617) = 322.99$, $p < .001$, $r = .59$. Thus, 98% of the FMR clients with this problem initially had recovered after use to no longer have the problem. At the start of counseling, 34% of self-referral clients employees ($n = 815$ of 2379) were classified as having a productivity problem. This outcome changed to be only 5% of these clients at Post ($n = 97$). This change was significant and a very large effect: $F(1,2378) = 914.80$, $p < .001$, $r = .53$. Thus, 78% of the clients with a productivity problem initially had recovered after use. Compared to the voluntary users, the FMR group had slightly more of total clients with work productivity problem before use of counseling: 42% *vs*. 34% ($X^2[1,2996] = 14.32$, $p < .001$, $r = .07$ very small size effect). More of the FMR group also improved after use to have fewer clients with this problem: 37 fewer employees per every 100 clients clients *vs*. 29 for the SOR group (recovery rate ammong the at-risk clients: FMR 88% *vs*. SOR 85%; $X^2[1,2996] = 49.81$, $p < .001$, $r = .13$ small size effect). Simply put, slightly more of FMR clients started EAP use at problem level of work productivity and slightly more of this group had recovered after use to return to more normal range of medium or higher levels of work performance.

**3.7 Improvement in Hours of LPT.** The final work outcome examined was the total hours of lost productive time (LPT). This measure combined the hours of self-reported absence with an estimated number of hours of time while working that was unproductive (i.e., hours lost due to work presenteeism – obtained by rescaling the Stanford 6-item measure – see Appendix B). The findings for absence were already presented above. These results for work LPT are shown in Table 2 and Figure 9.

For the typical FMR client, the average number of combined hours of absence and lost productivity per month had changed from 77 hours at Pre to about 21 hours at Post. This is out of a 160-hour maximum monthly work schedule. The key result of having 56 fewer hours of LPT per month was significant and a very large size statistical effect: $F(1,616) = 1343.38$, $p < .001$, $r = .83$. The careful reader will note these findings reveal that the amount of unproductive time lost while working among the FMR clients far exceeded the amount

of unproductive time lost from absence. Indeed, the presenteeism hours accounted for 84% of the total LPT at Pre and 98% of the total LPT at Post. By comparison, for the SOR client, the average number of combined hours of LPT per month had changed from 67 hours at Pre to about 28 hours at Post. The key result of having 39 fewer hours of LPT per month was significant and a very large size statistical effect: $F(1,2378) = 2275.70$, $p < .001$, $r = .70$. Testing these two positive results directly in a RM-ANOVA procedure indicated that the FMR clients had significantly greater improvement than the other kinds of referral clients in overall lost work time, $F(1,2994) = 98.05$, $p < .001$, $r = .18$ small size interaction effect.

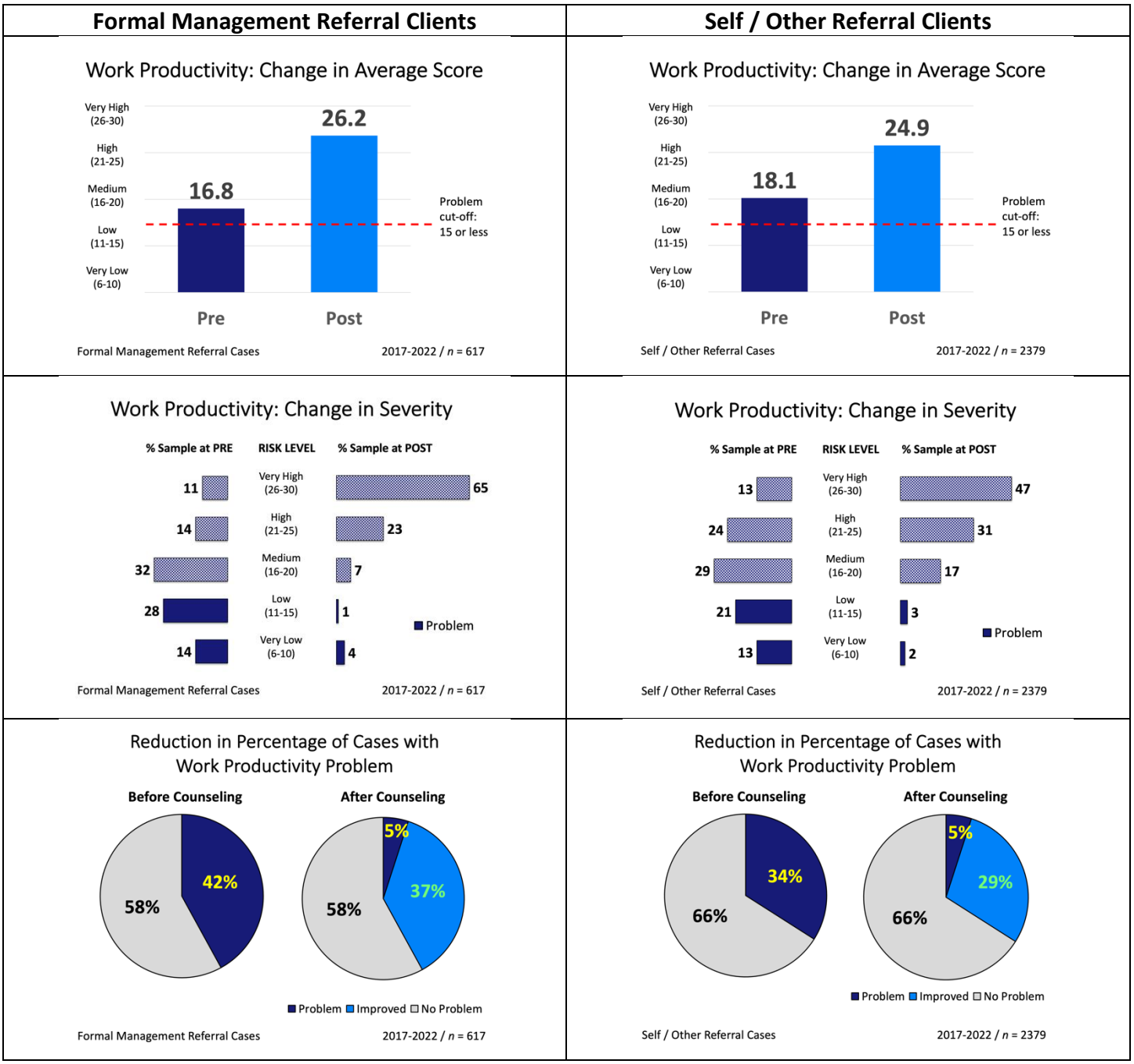


**Figure Set 8.** Referral types compared on work productivity metrics.

To understand these results, it is helpful to know what levels of work loss are reported by employees in general. Other research on healthy employees offers a normative level of LPT at about 27 hours per month (24 hours from presenteeism and 3 hours from absenteeism) [see review in 9]. Thus, the employees referred to EAP counseling by his or her manager at work had almost 3 times the amount of lost productive time than normally experienced by most employees in general (77 hours / 27 hours = 2.9 ratio).

**Table 2.** *Referral Types Compared on Work Outcome Components of Lost Productive Time (LPT)*

| Variables – Per month | Norms U.S. | Formal Management Referral Clients ($n$ = 617) | | | Self / Other Referral Clients ($n$ = 2,379) | | |
|---|---|---|---|---|---|---|---|
| | | Pre | Post | Change | Pre | Post | Change |
| Hours of total scheduled work | | 160 | 160 | | 160 | 160 | |
| Hours unproductive due to missed work (absenteeism) | 3.00 | 12.20 | 0.32 | 11.88 | 7.01 | 1.49 | 5.52 |
| Hours actually worked | | 147.80 | 159.68 | | 152.99 | 158.51 | |
| % worked time being productive | 85% | 56% | 87% | | 60% | 83% | |
| % worked time being unproductive (presenteeism) | | 44% | 13% | | 40% | 17% | |
| Hours unproductive while working (presenteeism loss) | 23.6 | 64.75 | 20.26 | 44.49 | 59.74 | 26.49 | 33.25 |
| Hours of lost productive time combined (LPT) | 26.7 | 76.95 | 20.58 | 56.37 | 66.75 | 27.98 | 38.77 |
| % of work schedule being productive and not absent | 82% | 52% | 87% | | 58% | 83% | |

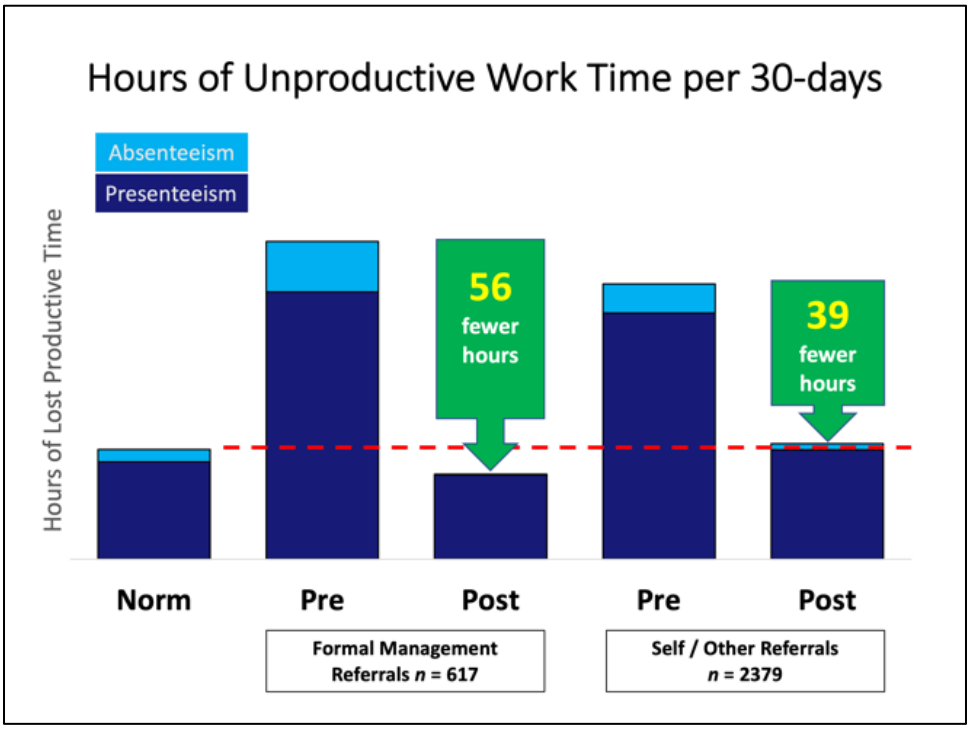


**Figure 9.** Referral types compared on components of lost productive work time (LPT)

*Summary of Work Outcome Analyses*

As shown in Table 3, the two types of referral clients were different on almost all of the work factors examined. The FMR clients tended to have small to medium size effects for having more clients at problem levels at the start of EAP use for absence and for presenteeism, and also having greater improvement afterwards for the reduction in the percentage of clients at problem status and for changes in average hours lost to absence or unproductivity while working.

**Table 3.** *Summary of Work Outcome Factors Differences by Referral Type*

| Work Outcome Factors | Sample size FMR *vs.* SOR | *r* | Statistical effect size | Comment |
|---|---|---|---|---|
| Absenteeism – Hours | 617 *vs.* 2379 for all tests | .17 | small | FMR started higher severity and improved more after |
| Absenteeism – At-Risk % of Pre | | .12 | small | FMR more at problem level |
| Absenteeism – % Recovered at Post | | .19 | small/medium | If started at-risk, more of FMR recovered to normal level |
| Presenteeism – Rating on scale | | .14 | small | FMR started higher severity and improved more after |
| Presenteeism – At-Risk % of Pre | | .07 | very small | FMR more at problem level |
| Presenteeism – % Recovered at Post | | .13 | small | If started at-risk, more of FMR recovered to normal level |
| LPT Combined – Hours | | .18 | small/medium | FMR started higher severity and improved more after |

*Note*: All findings significant at $p < .001$ but vary by statistical effect size *r*.

## PART 4: Behavioral Health Disorders Compared by Referral Type

During the more recent Phase 2 of the study data collection, at the start of counseling, 245 FMR clients and 8,029 self/other referral clients had completed both of the behavioral health risk measures (AUDIT-C and PHQ-4). The referral type groups were also compared on the change in behavioral health risks among the subset of these counseling users with longitudinal data.

### 4.1 Clinical Status for Behavioral Health Factors

When starting EAP use, 28% of the total FMR clients ($n$ = 69 of 245) were classified as being at-risk for hazardous alcohol use on the AUDIT-C standardized screening measure. This was almost twice as many as the Self/other referral group, which had 15% of the total clients at-risk for hazardous alcohol use ($n$ = 1215 of 8,029). This difference was significant and a medium size effect ($X^2[1,8274] = 30.79$, $p < .001$, $r = .25$). These results are shown in Figure 10. Other tests [not shown] indicated that the severity level among the subsamples of the clients at-risk in each referral type group was similar (i.e., average scores on the AUDIT-C at Pre did not differ significantly). Thus, while the percentage of clients at-risk out of the total group differed between the two referral groups, the severity level of hazarous alcohol use symptoms was similar among those who were at-risk.

When starting EAP use, 23% of the FMR clients ($n$ = 57 of 245) were classified as being at-risk for mental health based on the PHQ-4 standardized screening measure. This level was less than the Self/other referral group, which had 38% of the total clients at-risk for menta health ($n$ = 3,054 of 8,029). These results are shown in Figure 10. This difference was significant and a medium size effect ($X^2[1,8274] = 22.11$, $p < .001$, $r = .23$). To be more specific, at Pre 24% of the FMR clients ($n$ = 59 of 245) were classified as being at-risk for anxiety, compared to 43% of the self/other referral group ($n$ = 3,422 of 8,029). This difference was significant and a medium size effect ($X^2[1,8274] = 33.57$, $p < .001$, $r = .25$). Also, at Pre 22% of the FMR clients ($n$ = 54 of 245) were classified as being at-risk for depression, compared to 32% of the self/other referral group ($n$ = 2,554 of 8,029). This difference was significant and a small size effect ($X^2[1,8274] = 10.51$, $p < .001$, $r = .19$). Other tests [not shown] indicated that the severity level among the subsamples of the clients at-risk for mental health in each referral type group was similar (i.e., average scores on the PHQ-4 did not differ significantly). Thus, while the percentage of clients at-risk out of the total group differed between the two referral groups, the severity level of mental health symptoms was similar among those who were at-risk.

When the alcohol and mental health risks were combined, at the start of counseling, 43% of the total FMR clients ($n$ = 105 of 245) were classified as being at-risk for one or more behavioral health problems. This level among FMR clients was not significantly different ($p = .39$) from the Self/other referral group which had 46% of clients at-risk ($n$ = 3,662 of 8,029). These results are shown in Figure 10. Thus, the overall level of behavioral health risk within each two referral type was similar, but the relative mix of the alcohol and mental health disorders among the clients in each type was offsetting, such that the FMR group was characterized more by alcohol risk whereas the opposite pattern applied to the Self/other referral type which was characterized more by mental health risk.

This comparison found when analyzing validated behavioral risk measures supports the same pattern of differences identified in the earlier Part 2 results of the profile factors analyses involving the relative mix of the same presenting issue topics in each referral group for why the EAP was used by these employees. These findings using validated risk screener tools also serve to validate the self-reported clinical issue topic as well as we would expect there to be a positive match between the type of risk found on the screener measure for a client and the reason why that employee used the counseling service. These findings also replicate past research as well [9,10,12].

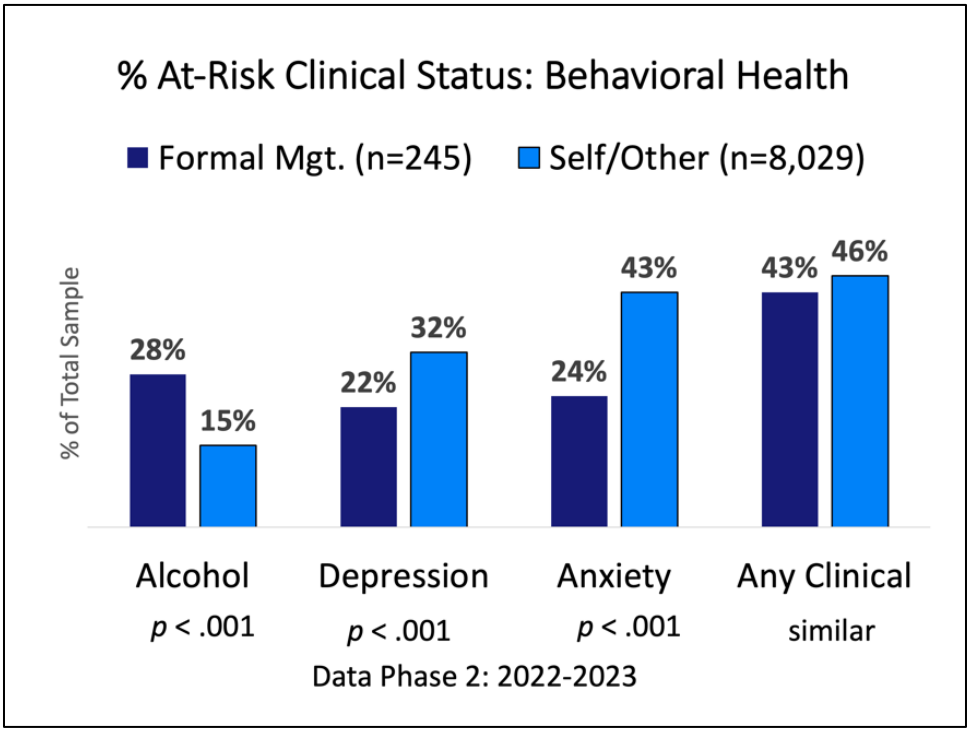


**Figure 10.** Referral types compared on behavioral health risk factors at the start of counseling.

### 4.2 Change in Clinical Status for Behavioral Health Factors After Counseling

Finally, we examined the follow-up data available for the two referral groups. The FMR subsample was 101 clients (37% of 270 possible clients with at least a 100-day span between their start date and our date when the raw data was obtained for the study from the clinical management system). The Self/Other referral group was 151 clients (7% of the 2,172 relevant possible clients). Both groups had over 100 clients and thus can offer some evidence to compare. However, these counts of clients with longitudinal data on behavioral health risks are much smaller than the results examined for the work outcomes presented in Part 3, so they must be viewed with some caution. These longitudinal change results for alcohol and overall mental health risk factors are shown in Figure 11.

Being at-risk for hazardous alcohol use changed from 30% at Pre to only 5% at Post for the FMR clients ($n$ = 30 and 5, respectively of 101 total). This change was significant and a very large effect: $F(1,101) = 12.45$, $p < .001$, $r = .35$. Thus, 83% of the FMR clients with an alcohol risk recovered after use to no longer have this risk. Being at-risk for hazardous alcohol use also changed from 12% at Pre to only 3% at Post for the self/other referral clients ($n$ = 18 and 5, respectively of 151 total). This change was significant and a very large effect: $F(1,151) = 22.83$, $p < .001$, $r = .39$. Thus, 75% of these voluntary use clients at-risk for hazardous alcohol use had recovered after use to no longer be at-risk. Compared to the voluntary users, the FMR group had significantly stronger relative improvement in reducing their risk for hazardous alcohol use after counseling ($X^2[1,252] = 34.00$, $p < .001$, $r = .37$ large effect).

The mental health risk (anxiety and/or depression) changed from 22% at Pre to only 3% at Post for the FMR clients ($n$ = 22 and 3, respectively of 101 total). This change was significant and a very large effect: $F(1,101) = 3.66$, $p = .05$, $r = .19$. Thus, 82% of the FMR clients with a mental health problem at the start had recovered after use to no longer have this risk. Mental health risk changed from 32% at Pre to 22% at Post for the SOR clients ($n$ = 48 and 33, respectively of 151 total). This change was significant and a very large effect: $F(1,151) = 32.64$, $p < .001$, $r = .47$ Thus, 32% of the SOR clients initially at-risk for mental health disorders use had recovered after use to no longer be at-risk. Compared to the voluntary users, the FMR group had significantly stronger relative improvement in reducing mental health risk after counseling ($X^2[1,252] = 41.35$, $p < .001$, $r = .41$ large effect).

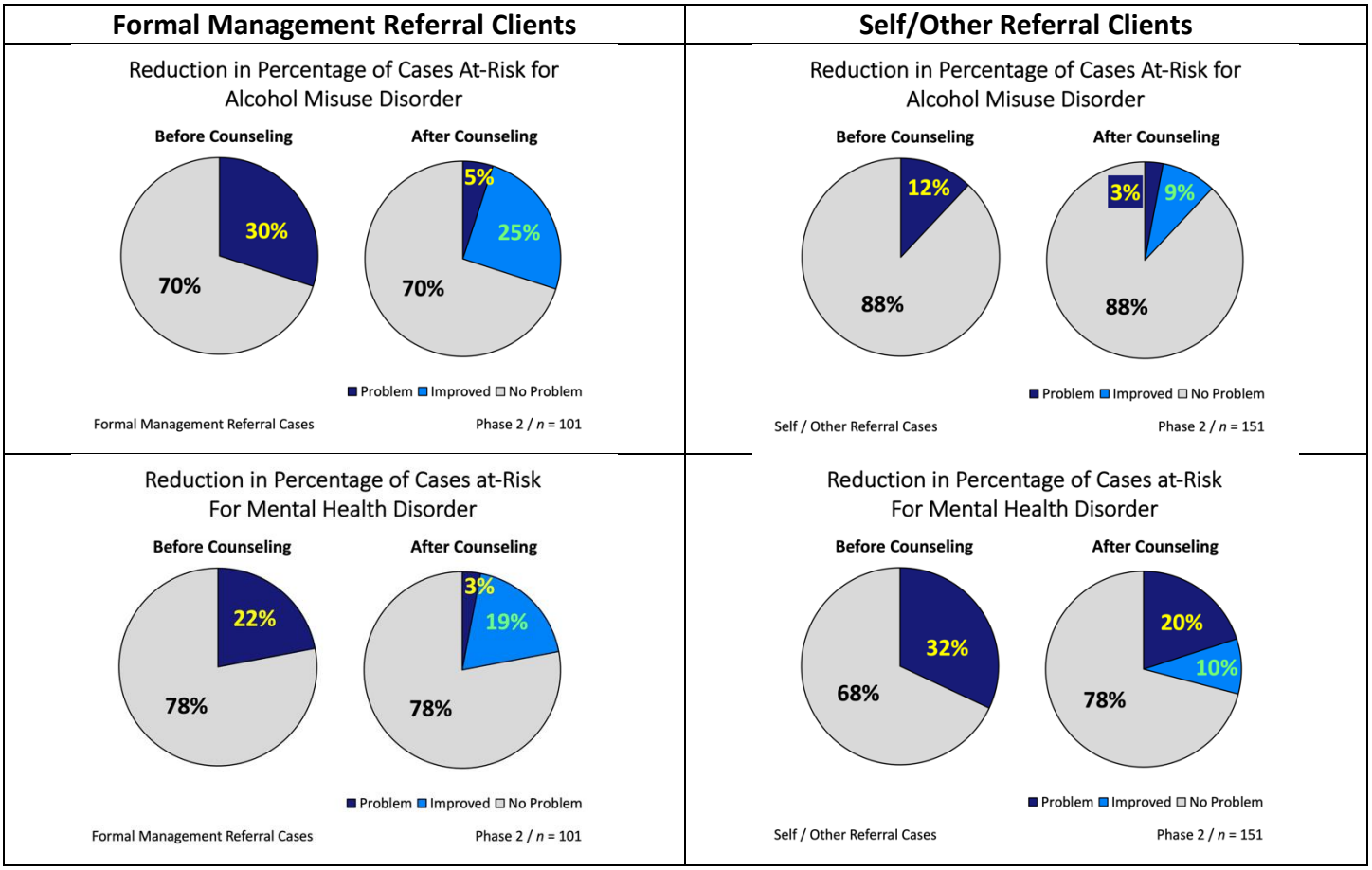


**Figure Set 11.** Referral types compared on changes after counseling on behavioral health risk factors in longitudinal samples.

*Summary of Health Outcome Analyses*

As shown in Table 4, the two types of referral clients were different on almost all of the health factors examined. The FMR clients tended to have medium to large size effects for having more clients at-risk at the start of EAP use for alcohol – yet had lower percentages of clients at-risk for anxiety and depression, and also had greater improvement afterwards for both alcohol and mental health risks.

**Table 4.** *Summary of Behavioral Health Outcome Factors Differences by Referral Type*

| Health Risk Factors | Sample size FMR *vs.* SOR | *r* | Statistical effect size | Comment |
|---|---|---|---|---|
| % of Total Group At-Risk at Pre | | | | |
| Alcohol | | .25 | **medium** | FMR more at clinical level |
| Anxiety | | .25 | **medium** | FMR less at clinical level |
| Depression | 245 *vs.* 8029 | .19 | **small/medium** | FMR less at clinical level |
| Mental Health | | .23 | **medium** | FMR less at clinical level |
| Any Health | | .00 | no effect | Similar in overall risk |
| If was At-Risk at Pre, % Recovered at Post | | | | |
| Alcohol | 101 *vs.* 151 | .37 | **large** | FMR more recovered |
| Mental Health | | .41 | **large** | FMR more recovered |

*Note*: All findings in **bold** significant at $p < .001$ but vary by statistical effect size *r*.

## IV. Discussion

*4.1. Summary of Findings*

This project provided real-world conditions with a national 7-year sample to allow us to empirically investigate the special set of EAP users who were formally referred to get counseling by their management at work. Overall, FMR clients are relatively rare among the

total caseload at EAPs, comprising about 3% of all clients each year. The background profile revealed mostly similarities between the two referral types, but also some major differences in who was using the EAP and why. Referral type had little to do with the year of service use, the employer specified contract for the maximum number of counseling sessions allowed per client per episode, the age of the client, how the counseling was delivered (i.e., access modality) and how long the counseling episode lasted (although FMR clients were somewhat shorter on average). Factors with meaningful differences included the reason why the service was used (i.e., presenting issue), the gender of the client (which was linked to certain issues more prevalent in FMR clients with majority males) and to a lesser extent also the industry of the employer (which also was linked to certain industries with historically more males). All of these results are consistent with the past literature review findings that also profiled the characteristics of FMR clients [9,10,12,16,19,21,24,29,30].

What is new from this study are the outcome test results using scientific measures. All of longitudinal results found improvements in work and health outcomes after the use of EAP counseling with large size statistical effects for both types of referral clients. Yet the FMR clients tended to have relatively greater improvement, which was due in part to their starting out use of the EAP at greater severity of problems in work and health (at least for alcohol) than the Self/other referral clients. We found the expected clinical profile difference such that far more of the FMR clients focuses on a substance use issues during EAP treatment and they had twice as many clients who started EAP use above the cut-off for a clinical level of hazardous alcohol use. In contrast, FMR clients tended to have lower levels of anxiety and depression risks compared to the Self/other referral group.

In 2006, Cagney [42] stated that across the EAP industry, formal management referrals to counselors likely accounted for about 5 percent of all clients. She reflected on the possible reasons why this FMR rate was not higher. One reason involved a debate in the field over whether supervisory referrals should be made at all: Are they coercive if they explicitly involve job jeopardy for non-compliance?; Are they not needed as employees are adults and responsible for their own behavior? Yet, supervisors do know their subordinates and thus can provide a watchful eye to patterns of work and interpersonal behavior that are troubling. In such instances, a referral the EAP for assessment and brief treatment from a licensed professional behavioral health clinician certainly makes sense – especially when EAP use is provided at no direct cost to the employee user. The key to increasing the use within organizations of FMR is providing enough training to supervisors so that they can learn how and when to properly make referrals to the EAP for those employees who need assistance [43]. Higher quality EAPs are also good at finding qualified treatment partners and making referrals out of the EAP for the clients with more severe symptoms of mental health or addiction disorders [44-46].

### *4.2. Implications*

One of the major implications of this study is that managers can be confident that when they make a formal referral of a troubled employee to their employee assistance program that the counseling will likely be very successful. Our results found large improvements in the crucial business-relevant outcomes of reducing absence from work and in restoring work productivity to normal levels. We also found recovery after counseling for most clients in their clinical problems involving clinical levels of both hazardous alcohol use and common mental health disorders of anxiety or depression. These positive work and health outcome results were found among both referral types, but were even better for the employees formally referred to the program, should FMR clients need specialty care.

We contend that workplaces that engage in more supervisor orientations and trainings about the role and purpose of EAP [47] will likely have more of their supervisor staff making referrals to the EAP to effectively support these higher risk workers. Indeed, there is evidence from a study that used an experimental design to compare three groups that received supervisor training with a control group that received no training [48]. A total of 403 supervisors were randomly assigned to one of the four study groups and tested immediately after training and one year following training. Supervisors who received training showed increased knowledge of the EAP at one-year follow-up had more management consultations with the EAP and also made more referrals to the EAP compared to the control group.

The effective promotion of the best practices and regular use of formal management referrals (when warranted) fits into a larger conceptual model that describes how a full-service EAP can help organizations to better manage employee behavioral health risks [49-54]. Using the expertise of experienced EAP counselors who understand the workforce and how to best support and accommodate the needs of employees with substance use or psychological distress is of value to organizations.

### *4.3. Limitations and Future Directions*

This study documents applied research conducted in real world use settings. Thus, it has high validity and applicability to the national employee population context in the United States. However, there are certain limitations to this study. Although it uses a large sample with clients spanning a national geographic context in the U.S., over 7 years, and involving thousands of different employers, it nonetheless featured the same commercial EAP vendor that provided all of the services. Another potential limitation is asking employees to report on their work and behavioral health symptoms. Other more objective records or external sources of these outcomes could have potentially provided more accurate measurements than our use of a self-report approach. Some studies with both sources of such data,

however, tend to show that employee self-reports for work absence and work productivity tend to be a good match with company record data [55-61]. Self-reports of alcohol use also have been found to be accurate when compared with urine testing bio-marker data [62], including reports made on the AUDIT scale we used in this study [63,64]. Self-reported levels of depression symptom severity also tend to correspond well with psychiatric records, pharmacy and health care treatment claims data from the same patients [65,66].

## V. Conclusion

This applied evaluation study provides evidence about employees formally referred to use of EAP counseling by their supervisor at work. Although they comprise a small segment of the overall caseload (about 3%), the employees referred by their supervisor or manager at work to use counseling from the EAP do have a distinct profile in certain characteristics. They tend to be males more than females to have a more severe risk profile for work outcomes (particularly absenteeism) and alcohol and drug misuse problems. Importantly, these kinds of clients also tended to have better improvement after use of the service compared to other clients who voluntarily use the service. Despite some limitations common to applied real-world research, this study advances our understanding of the experience and the positive impact of counseling for higher-risk employees formally referred to the EAP.

## APPENDIX A

Depending on the time of when the data was collected, a client was either in Phase 1 (January of 2017 through July of 2022) or Phase 2 (August of 2022 through March of 2023). The set of outcome measures was different for each phase. The work outcomes were collected in Phase 1. The health risk outcomes were collected in Phase 2.

**Work Absenteeism**. Developed by Chestnut Global Partners [68], the Workplace Outcome Suite (WOS) is a validated questionnaire with five outcomes that has been used in over 40 EAP studies [8-10]. One of the five outcomes on the WOS is work absenteeism. The original 5-item Absenteeism Scale was used in this study. The instructions were to: "Please report for the period of the past 30 days the total number of hours your personal problems (or presenting issue): (see item list)". Item 1: "Caused you to miss work altogether." Item 2: "Made you late for work." Item 3: "Caused you to take off early." Item 4: "Pulled you away from your normal work location." Item 5: "Required you to be in the phone, e-mail or internet while at work." It has a fill in the blank response for the number of specific hours of absence in the past 30-days for each of the five items. The hours are summed from the five items for total number of absence hours. Based on past research using the WOS [1,2,8-10], employees who were not working were judged as irrelevant to answer questions about absence from work or their level of productivity while working. This criterion was operationalized by excluding all clients who reported 160 or more hours of absence in the past 30 days (i.e., an amount that exceeded a standard U.S. full-time schedule of 8-hour daily work shift performed five days per week). Any clients who reported missing 160 or more hours were excluded from analysis of the work outcomes. This not working group was very rare, at about one-third of one percent of all employees when starting use of the EAP. As other research shows the typical employee in the U.S. misses only about 3 hours per month of work due to health-related issues [see review in 9] problem status for work absenteeism was defined as 4 or more hours of absence in the past 30 days. Unlike the other outcome scales in this study, this measure did not use a set of statements with the same ratings and thus the internal reliability was not relevant to assess.

**Work Presenteeism - SPS**. The brief 6-item version of the Stanford Presenteeism Scale (SPS-6) is a widely used measure for assessing the impact of health problems on the work productivity of employees [69,70]. It consists of two dimensions, one on completing work (items 2, 5, and 6) and a second on avoiding distraction while working (items 1, 3, and 4). It has response options of: (1) *Strongly disagree*; (2) *Somewhat disagree*; (3) *Uncertain*; (4) *Somewhat agree*; and (5) *Strongly agree*. The items are answered for the time period of the past month. Three of the six items are reverse scored (items 1, 3, and 4). The SPS-6 score is the sum of the three raw scores and the three reversed scores (range 6–30). Note that the creators of this scale defined presenteeism as a *positive* aspect of work productivity [69]: "A decrease in presenteeism can hurt productivity in a way similar to an increase in absenteeism" (p. 14). However, almost all other researchers in this area define the concept of presenteeism negatively as a problem of not being psychologically present enough while working to perform one's job properly [8-10,68,72,73]. Therefore, the original 1-5 direction of the ratings was retained but we re-labelled as higher total scores on the SPS-6 as indicating greater work productivity (i.e., less work presenteeism as normally defined) while at work. A higher total scale score indicates greater work productivity / less presenteeism. Based on the Consortium for Mental Healthcare [74], scale scores were grouped into five levels of work productivity, ranging from low to high: Very Low productivity 6-10; Low 11-15; Medium 16-20; High 21-25; Very High 26-30. Similar to the previous studies with CuraLinc Healthcare [1,2], we split the distribution of scores into two groups with a score of 15 or below (in the very low to low range) indicating a "problem" level of work productivity and scores of 16-30 range as "no problem." This scale had excellent psychometric properties with high internal consistency at both time points (Pre $\alpha$ = .94; $N$ = 26,875; Post $\alpha$ = .97; $n$ = 3,870) and a modest but significant Pre to Post correlation among those with longitudinal data ($r_{paired}$ = .38; $n$ = 3,870). Only clients who were working (based on the absence hour data being < 160 hours missed) were retained for analyses using the work productivity measure.

**Hours of Lost Productive Time**. We also wanted to determine how much total work productivity loss there was among users of the service. Seminal research conducted for the American Productivity Audit project [75] identified how a single simple metric can be used

to index the dual impact of work absenteeism and work presenteeism. This metric is called lost productive time (LPT) [9,10,76]. It is measured in hours of time that is unproductive per month. We combined data from the WOS-5 work absenteeism measure and the SPS-6 presenteeism measure for clients who were actively working. As expected, the two work measures were modestly intercorrelated in the full sample at Pre ($r$ = .21, $p$ < .001, $n$ = 33,360). Thus, combing the two work measures into a single measure of hours of LPT was empirically supported.

The SPS-6 summary score for each client at Pre and Post were assigned new values corresponding to different levels of work productivity on a 0 to 100% scale from low to high. The value of using a percentage scaling is that it can be converted directly into hours of work either absent or unproductive as a percentage of total hours of scheduled work time. The new specific levels of estimated work time that was unproductive was determined through multiplying the SPS-6 total score by 3.33 (i.e., the minimum score of 6 becomes a new score of 20 and the maximum score of 30 becomes a new score of 100). This re-coding of the SPS-6 scores was also done in our earlier study of coaching [2] and follows a similar logic used in past research on EAP counseling outcomes for recoding the WOS Presenteeism measure [9,10] to create a LPT measure. When this adjusted score is divided by 100, it yields a percentage that ranged from 20% to 100%. An employee with a *very low* score on this scale was working at about a 27% level of productivity; a *low* score was about 43% productive; a *medium* score was about 60% productive; a *high* score was about 77% productive, and a *very high* score was about 93% productive. Other research has found the typical healthy employee in the U.S. is about 85% productive on a 0-100% scale [see review in 9].

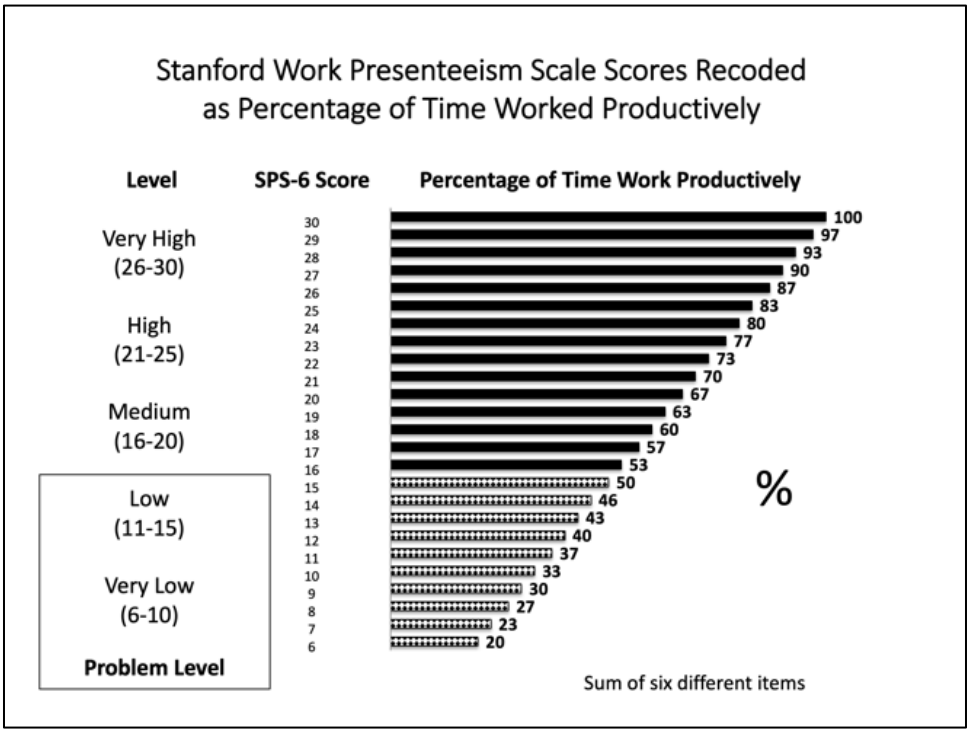


**Figure A1.** Re-coding SPS-6 summary scores into estimated percentage of time productive while working.

The LPT hour estimate was calculated using the following steps for all clients with absenteeism and presenteeism data (for Pre period and again for Post period, if available). This math involved the following calculation steps:

- Step 1. Work schedule in month for enployee assumed to be 160 hours (i.e., full-time worker status of a 8-hour work shift X 5 day work week = 40 hours weekly X four weeks in month).
- Step 2. Hours of absenteeism = from user self-report on WOS measures (range 0 to 159).
- Step 3. Worked time = Step 1 minus Step 2.
- Step 4. Severity level of work presenteeism while working as percentage ranging from 0 to 100% of potential total work time lost due to impact of personal counseling issue of employee. This estimated level of unproductivity ws caclulated as 100% minus level of presenteeism as % from recoding of either the SPS-6 or WOS measure)
- Step 5. Hours of presenteeism = Step 3 X Step 4 (range 0 to 128).
- Step 6. Total LPT Hours = Add Step 2 absenteeism and Step 5 presenteeism hours.

**Alcohol Misuse**. Developed by the World Health Organization, the Alcohol Use Disorders Identification Test is a 10-item scale (AUDIT-10) [77,78]. It also has a brief 3-item version called the AUDIT-C, which features only the first three items of the full scale that emphasize consumption level [79]. It is scored by adding together the scores for the following three questions. Item 1: "How often do you have a drink containing alcohol?" 0 = *never*; 1 = *Monthly or less*; 2 = *2-4 times per month*; 3 = *2-3 times weekly*; 4 = *4 or more times per week*. Item 2: "How many drinks containing alcohol do you have on a typical day of drinking?" 0 = *1 or 2 drinks*; 1 = *3 or 4 drinks*; 2 = *5 or 6 drinks*; 3 = *7 to 9 drinks*; 4 = *10 or more drinks.* Item 3: "How often do you have 5 (for men under age 65) / 4 (for women and men over age 65) or more drinks on one occasion?" 0 = *never*; 1 = *less than monthly*; 2 = *monthly*; 3 = *Weekly*; 4 = *Daily or almost daily*. This last item assesses what is called binge drinking. The score can range from 0 to 12 and higher scores on this measure indicate more hazardous alcohol use. "At-risk" clinical status is defined as a score of 3 or higher for women or 4 or higher for men. This scale had excellent psychometric properties with high internal consistency at both time points (Pre $\alpha = .77$; $N = 8{,}274$; Post $\alpha = .64$; $n = 256$) and a significant Pre to Post correlation among those with longitudinal data ($r_{paired} = .50$; $n = 252$).

**Mental Health**. Mental health common disorders of depression and anxiety severity were measured using The Patient Health Questionnaire 4-item brief scale (PHQ-4) [80,81]. This scale combines two items from the longer PHQ-9 full scale for depression [82,83] and two items from the Generalized Anxiety Disorder full 7-item scale (GAD-7) [84,85]. The PHQ-4 has been used in many research studies and has established validity and reliability. The instructions state: "Over the last 2 weeks, how often have you been bothered by any of the following problems?" Each item (see below) has the same four response options of: (0) *Not at all*; (1) *Several days*; (2) *More than half the days*; and (3) *Nearly every day*.

Depression. The PHQ-2 is created by adding together the scores for the two depression items on the PHQ-4. These questions were: "Little interest or pleasure in doing things" and "Feeling down, depressed, or hopeless." This scale ranges from 0 to 8. Higher scores on this measure indicate greater depression. Clinical at-risk status for depression was categorized as scores of 3 or higher [80,81]. Despite being only two items, this scale had excellent psychometrics with high internal consistency at both time points (Pre $\alpha = .85$; $n = 8{,}303$; Post $\alpha = .87$; $n = 281$) and a large and significant test-retest correlation ($r_{paired} = .40$, $n = 281$).

Anxiety. The GAD-2 is created by adding together the scores for the two anxiety items on the PHQ-4. The questions were: "Feeling nervous, anxious or on edge" and "Not being able to stop or control worrying." This scale ranges from 0 to 8. Higher scores on this measure indicate greater anxiety. Clinical at-risk status for anxiety was categorized as scores of 3 or higher [80,81]. This scale had excellent psychometrics with high internal consistency at both time points (Pre $\alpha = .88$; $n = 8{,}303$; Post $\alpha = .79$; $n = 281$) and a significant test-retest correlation ($r_{paired} = .38$; $n = 281$). The items for this scale were collected only at Phase 2 of data collection.

Mental Health. In our data, as expected, the PHQ-2 depression measure was significantly correlated with GAD-2 anxiety measure at both Pre ($r = .57$, $p < .001$, $N = 8{,}303$) and Post ($r = .65$, $p < .001$, $n = 281$). A combined measure of overall mental health was represented by adding together all four items. This scale ranges from 0 to 12. Higher scores on this measure indicate greater mental health distress. Clinical at-risk status was categorized as scores of 6 or higher [80,81]. In our data, the PHQ-4 combined had excellent psychometrics with high internal consistency at both time points (Pre $\alpha = .85$; $N = 8{,}303$; Post $\alpha = .84$; $n = 281$) and a significant Pre to Post correlation among those with longitudinal data ($r_{paired} = .41$; $n = 281$).

## APPENDIX B

**Table B1.** *Formal Management Referral Clients by Year: Count and Percentage of Total*

| Year of EAP use | Total Clients | Formal Management Referral as % of All Counseling Clients | |
|---|---|---|---|
| | | *n* | % |
| 2017 | 1,929 | 83 | 4.3 |
| 2018 | 4,992 | 237 | 4.7 |
| 2019 | 5,918 | 247 | 4.2 |
| 2020 | 8,521 | 307 | 3.6 |
| 2021 | 9,558 | 57 | 0.6 |
| 2022 | 8,015 | 224 | 2.8 |
| 2023-Q1 | 3,053 | 60 | 2.0 |
| Total | 41,986 | 1,215 | 2.9 |

**Table B2.** *Profile Factors Mostly Similar by Referral Type*

| Factor | Referral Type: **Formal Management** | Referral Type: **Self or Other** | Interpretation |
|---|---|---|---|
| **Year of EAP use** | % ($n$ = 1,215) | % ($n$ = 40,771) | Small differences (other than year 2021) |
| 2017 | 6.8 (83) | 4.5 (1,846) | |
| 2018 | 19.5 (237) | 11.7 (4,755) | |
| 2019 | 20.3 (247) | 13.9 (5,671) | |
| 2020 | 25.3 (307) | 20.1 (8,214) | $\chi^2(6,141986) = 313.60$, $p < .001$ |
| 2021 | **4.7** (57) | 23.3 (9,501) | |
| 2022 | 18.4 (224) | 19.1 (7,791) | |
| 2023-Jan. to Mar. | 4.9 (60) | 7.3 (2,993) | |
| **Industry of employer** | % ($n$ = 1,215) | % ($n$ = 40,771) | Small differences in some industries |
| Manufacturing | **34.4** (418) | 16.9 (6,905) | |
| Gov./Public Service | 14.7 (178) | 9.1 (3,727) | |
| Blue collar | 13.4 (163) | 10.3 (4,182) | |
| Healthcare | 12.5 (152) | **21.5** (8,770) | |
| Retail/Restaurant | 7.2 (88) | 7.2 (2,946) | $\chi^2(8,41986) = 425.46$, $p < .001$ |
| Financial/Insurance | 6.6 (80) | **12.3** (5,015) | |
| Education | 3.7 (45) | **11.7** (4,790) | |
| Technology | 2.3 (28) | 5.9 (2,396) | |
| Other | 5.2 (63) | 5.0 (2,040) | |
| **Session model contract** | % ($n$ = 1,210) | % ($n$ = 40,225) | Very small differences |
| 3 or 4 session limit | 12.8 (155) | 11.8 (4,751) | |
| 5 session limit | 53.5 (647) | 41.3 (16,628) | $\chi^2(3,41435) = 95.03$, $p < .001$ |
| 6 session limit | 22.6 (274) | 27.4 (11,031) | |
| 7 to 20 session limit | 11.1 (134) | 19.4 (7,815) | |
| $M$ (SD) | 5.3 (1.4) | 6.0 (11.6) | $t(41433) = -8.30$, $p < .001$ |
| **Duration of EAP use** | $n$ = 842 | $n$ = 3212 | Mostly similar but FMR shorter duration |
| Use episode in months: | % ($n$) | % ($n$) | |
| 1-30 days | 34.9 (294) | 25.5 (819) | |
| 31-59 days | 47.6 (401) | 52.5 (1686) | $\chi^2(3,4054) = 31.19$, $p < .001$ |
| 60-89 days | 8.1 (68) | 10.2 (328) | |
| 90 plus days | 9.4 (79) | 11.8 (379) | |
| Average days use: $M$ (SD) | 45.3 (36.8)<br>range 1 to 253<br>median = 44 | 53.5 (42.4)<br>range 1 to 320<br>median = 53 | $t(4052) = -15.13$, $p < .001$ |
| **Modality to access EAP** | % ($n$ = 1,215) | % ($n$ = 40,771) | Very small differences |
| In-person (face to face) | 76.5 (929) | 70.0 (28,541) | $\chi^2(1,41986) = 23.52$, $p < .001$ |
| Technology / web video | 23.5 (286) | 30.0 (12,230) | |
| **Age of client** | % ($n$ = 1,187) | % ($n$ = 39,133) | Very small differences |
| Under 30 years | 22.4 (266) | 22.5 (8,812) | |
| 30-39 years | 27.2 (323) | 31.7 (12,422) | $\chi^2(3,40320) = 22.65$, $p < .001$ |
| 40-49 years | 22.5 (267) | 23.2 (9,102) | |
| 50 plus years | 27.9 (331) | 22.5 (8,797) | |
| Average years: M (SD) | 40.7 (12.2) | 39.8 (11.6) | $t(40318) = 2.67$, $p < .001$ |

*Note*: FMR = formal management referral. Duration data only from clients in Phase 1 with specific dates associated with paired Pre & Post data on work absence measure.

**Table B3.** *Referral Type Differences by Client Gender and Presenting Issue*

| Factor | Referral Type: **Formal Management** | Referral Type: **Self or Other** | Interpretation |
|---|---|---|---|
| **Gender of client** | % ($n$ = 1,211) | % ($n$ = 40,487) | FMR 1.8X more male users |
| Male | **68.0** (823) | 37.6 (15,221) | $\chi^2(1,41698) = 458.01$, $p < .001$ |
| Female | 32.0 (388) | **62.4** (252,66) | |
| **Issue** | % ($n$ = 1,215) | % ($n$ = 40,765) | |
| SUD-Total | **40.4** (491) | 3.6 (1,469) | FMR 11.2 X more |
| SUD-Drug | **20.5** (249) | 0.7 (289) | |
| SUD-Alcohol | **19.9** (242) | 2.9 (1,180) | |
| Work stress | **22.6** (275) | 6.7 (2,726) | FMR 3.4 X more |
| MH-Anger management | **13.1** (159) | 1.7 (705) | FMR 7.7 X more |
| MH-Other | 6.2 (76) | **14.5** (5,886) | FMR 3.4 X less |
| MH-Depression | 5.9 (72) | **16.1** (6,574) | (14.1% < 47.9%) |
| MH-Anxiety | 2.0 (24) | **17.3** (7,063) | |
| Stress personal / other | 9.0 (109) | **21.2** (8,623) | FMR 4.1 X less |
| Marital relationship | 0.5 (6) | **14.5** (1,824) | (9.7% < 40.2%) |
| Family / child | 0.2 (3) | **4.5** (1,824) | |

$\chi^2(6,41980) = 6252.47$, $p < .001$, $\eta_p^2 = .149$ large effect (overall test using 7 categories of drug, alcohol, work, anger, mental health (other than anger), stress, marital & family

*Note*: FMR = formal management referral. SUD = substance use disorder.

**Table B4.** *Gender of Client Compared by Referral Types: By Specific Presenting Issue Why Use EAP*

| Issue during EAP use | Referral Type: **Formal Management** | Referral Type: **Self or Other** | Chi-square test within each issue of gender differences by referral type |
|---|---|---|---|
| | Male % ($n$ male / total) within issue | | |
| Alcohol | 73.6 (178 / 242) | 76.4 (983 / 1287) | Both majority male; Similar $\chi^2(1,1529) = 0.89$, $p = .35$ |
| Drug | 84.7 (211 / 249) | 78.1 (225 / 288) | Both majority male; FMR 1.1X more male $\chi^2(1,535) = 3.83$, $p = .05$ |
| Anger management | 81.1 (129 / 159) | 73.7 (518 / 703) | Both majority male; FMR 1.1X more male $\chi^2(1,862) = 3.84$, $p = .05$ |
| Work stress | **56.6** (155 / 274) | 33.6 (910 / 2,710) | FMR 1.6X more male $\chi^2(1,2984) = 57.30$, $p < .001$ |
| Other mental health | **55.0** (94 / 171) | 33.6 (6,864 / 19,270) | FMR 1.6X more male $\chi^2(1,19441) = 34.42$, $p < .001$ |
| Stress / personal life | **49.5** (53 / 107) | 33.6 (8,623 / 8,535) | FMR 1.6X more male $\chi^2(1,8642) = 12.02$, $p < .001$ |

| | | | |
|---|---|---|---|
| Marital / family | 33.3 (3 / 9) | 42.0 (3,232 / 7,688) | Test NA |
| Total | 68.0% | 37.6% | FMR 1.8X more male |

*Note*: FMR = formal management referral. Depression issue X gender of user in FMR clients: 52.8% male (*n* = 28/72) *vs*. Self/other - referral clients: 38.8% male (*n* = 2535/6526). Anxiety issue X gender of user in FMR clients: 54.2% male (*n* = 13/24) *vs*. Self/other - referral clients: 32.4% male (*n* = 2279/7030). NA = not applicable as too few clients to test.

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## DECLARATIONS

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**Author Contributions:** MA performed the statistical analyses of the aggregated dataset, conducted the literature review and drafted the manuscript. DP developed the study design, selected the measures involved and coordinated the data collection. All authors discussed the results and contributed to the final manuscript.

**Conflict of interest/Competing interests:** MA is an independent research scholar and consultant who received financial support from CuraLinc Healthcare for preparing this research manuscript. MA has also occasionally worked on other projects for this company. DP works for CuraLinc Healthcare company.

**Institutional Review Board Statement:** No formal ethical approval of the study was required due to the retrospective archival naturalistic design of the study. All employees who used the counseling and completed the outcome measures participated voluntarily and had their personal identity protected as all unique identifiers were removed from the data prior to analysis. All counselors involved in the delivery of the clinical treatment services were fully licensed and trained professionals. All aspects of this evaluation project and preparation of the manuscript followed the ethical guidelines of the American Psychological Association [32].

**Informed Consent Statement:** All data was collected as part of the normal business practices and not for a separate specific research project. Consent for participation in a research study and use of data for publication of study results was therefore not necessary.

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