

Executive Summary - Emergency Services

Objective:

1. Determine the effectiveness of TalentClick assessments to predict on-the-job success by analyzing additional data:
 - a. Detailed attendance data from Emergency 911 Operator incumbents.
 - b. Job Analysis Data from 'Job Experts' who have provided ratings on the behaviors they see as critical to success in the role.
 - c. This analysis will refine our understanding of how to predict on-the-job success by building on the insights gained from the analyses conducted in September 2019 and December 2019 that focused on predicting attendance scores and 'Passing the Training Milestone'.
2. Identify how to maximize the effectiveness of TalentClick assessments with refinements to the scoring algorithms and benchmarks (target score ranges).
3. Identify an 'Overall Benchmark' set of critical dimensions based on all research to date and represent this in a custom report format.
4. Recommendations for ongoing use and objectives for follow-on data analyses.

Summary: Top 9 most predictive traits for long-term success in the 911 Operator role have been identified (see pages 2/3). Creating a custom report, simplified to focus on **FIT Score** and 9 most predictive traits, is an option to consider for ease of use in both hiring and training.

Data Analyzed:

NEW

- 1) A new sample of 116 Emergency 911 Operator incumbents with the following:
 - **TalentClick AVP** (Attitude Values and Personality) Assessment data which includes 19 separate personality/behavioral dimension scores.
 - **TalentClick Business Reasoning** Assessment data which includes Verbal and Numerical Reasoning scores.
 - **Detailed Tenure/Attendance data**
 - Percent of Hours Missed due to Sick Leave
 - Tenure in Days
 - Employee Status —Active versus Separated

Data was collected over a two-year time frame (2018 to 2020)

Supervised machine learning techniques were used to test hundreds of thousands of benchmark range combinations to see which combinations would most accurately predict Tenure and Attendance.

- 2) Job Analysis Data - 8 "Job Experts" rated behaviors provided ratings on the behaviors they see as critical to success in the role. "Job Experts" know the job well, are currently in the role, or have been in the past.

The above data was analyzed alongside the previous sample of 234 Emergency 911 Operator incumbents and candidates with training performance data.

Highlights of Findings:

NEW Using the detailed attendance data, Job Analysis Data and the previous training performance data provided by Emergency 911, TalentClick has built an algorithm that uses a set of ideal assessment score ranges (benchmarks) for Emergency 911 Operators for the purpose of providing:

- A candidate's TalentClick FIT Score (ranging from 1 to 100), which is the candidate's **predicted long term success in the role.**
- The FIT Score incorporates predictive sub-measures on how a candidate will perform on the following Measures:
 - **Probability of Long Tenure (primary indicator of long-term resilience)**
 - **Probability of Low Sick Leave Hours**
 - **Probability of Passing Training Milestone**

NEW Top Predictors for the Overall Combined Benchmark: Using the insights gained from all analyses conducted to date, the **Key Assessment Dimensions** (in order of importance) used to predict success in training, good attendance and long tenure are:

1. **Verbal Reasoning** (COGNITIVE) with optimal results between the 65th and 99th percentile. Those who score in the high range for making correct decisions based on verbal or written information were significantly more likely to have success in training, good attendance and long tenure.
2. **Responsibility** (WVA) with optimal results between the 61st and 99th percentile. Those with a high range score are focused on task completion and fulfilling commitments to others and are significantly more likely to have success in training, good attendance and long tenure.
3. **Regimented** (WPP) with optimal results between the 70th and 99th percentile. Those with a high range score are detail and planning/organization focused and are significantly more likely to have success in training, good attendance and long tenure.
4. **Open Communication** (WVA) with optimal results between the 25th and 81st percentile. Mid-range scores are ideal. Individuals with extremely low scores (reserved/introverted) and extremely high scores (outgoing/extraverted) have lower success in training, attendance and tenure.
5. **Patient** (SQ) with optimal results between the 55th and 99th percentile. Those with a mid to high range score are more tolerant of others and even-tempered are significantly more likely to have success in training, good attendance and long tenure.
6. **Coachability** (WVA) with optimal results between the 60th and 99th percentile. Those with a high range score are open to hearing and acting on suggestions for improvement are significantly more likely to have success in training, good attendance and long tenure.

7. **Apprehensive** (SQ) with optimal results between the 55th and 99th percentile. Those with a mid to high range score are wary of unnecessary risks, do not seek excitement and are significantly more likely to have success in training, good attendance and long tenure.
8. **Dominant** (WPP) with optimal results between the 63rd and 90th percentile. High range scores, but not extremely high are ideal. Those with a mid to high range score are assertive and can take charge and direct others when necessary and are significantly more likely to have success in training, good attendance and long tenure. Extreme high scores (above 90) indicate a forceful interpersonal style and are outside the target range.
9. **Achievement-Focused** (WPP) with optimal results between the 66th and 99th percentile. Those with a high range score are goal focused and self-motivated and are significantly more likely to have success in training, good attendance and long tenure.

Note: Interestingly, the dimension 'Empathetic' which was presumed to be a key dimension, does not emerge as a key factor in the analyses. This seems counter intuitive, but the data clearly supports this finding.

Detailed Findings -- Summary of Insights:

- Overall Predictive Validity of the FIT Score: According to the US Department of Labor's table for interpreting criterion-related validity, the model is in the highest, **very beneficial** range ($r=.49, p<0.01, df=44$) for predicting *Fit*. *This is an improvement over the first analysis ($r=.371, p<0.01, df=66$) and is comparable to the second analysis ($r=.505, p<0.01, df=32$).*
- Use of Fit Score for Selection: Validation analysis gives evidence that the model may be used for approximately **24-30%** of the personnel *selection decision*. *This is an improvement over the first analysis (14-25%) and is comparable to the second analysis. 25-29% of a personnel selection decision.*

A. NEW Assessment dimensions that have significant correlations with Long Tenure:

- **Verbal Reasoning** (Cognitive): Those with a high range score were significantly more likely to have a longer tenure.
- **Dominant** (WPP): Those with a high range score (more Dominant) were significantly more likely to have a longer tenure.
- **Responsibility** (WVA): Those with a high range score were significantly more likely to have a longer tenure.
- **Apprehensive** (SQ): Those with a high range score (More Apprehensive) were significantly more likely to have a longer tenure.
- **Open Communication** (WVA): Those with a mid-range score were significantly more likely to have a longer tenure.
- **Calm** (WPP): Those with a high range score (more Calm) were significantly more likely to have a longer tenure.

B. NEW Assessment dimensions identified by 'Job Experts' as critical to on-the-job success are:

- **Verbal Reasoning** (Cognitive): A high-range score was rated as critical for on-the-job success. Ideal employees are seen as having advanced verbal problem solving skills.
- **Patient** (SQ): A high-range score (more Patient) was rated as critical for on-the-job success. Ideal employees are seen as being patient, understanding and less irritable than average.
- **Empathetic** (WPP): A high-range score (more Empathetic) was rated as critical for on-the-job success. Ideal employees are seen as being sensitive, considerate and focused on helping others.
- **Calm (SQ)**: A high-range score (more Calm) was rated as critical for on-the-job success. Ideal employees are seen as stress tolerant and even-tempered.
- **Achievement-Focused** (WPP): A high-range score (more Achievement-Focused) was rated as critical for on-the-job success. Ideal employees are seen as being self-motivated to exceed expectations.
- **Conformity** (WVA): A high-range score was rated as critical for on-the-job success. Ideal employees are seen as adhering to norms and rules. Please note that this dimension was previously called "Integrity".
- **Responsibility** (WVA): A high-range score was rated as critical for on-the-job success. Ideal employees are seen as focused on task completion and meeting commitments.
- **Coachability** (WVA): A high-range score was rated as critical for on-the-job success. Ideal employees are seen as being open to feedback on how to improve, and taking action based on that feedback.
- **Positive Attitude** (WVA): A high-range score was rated as critical for on-the-job success. Ideal employees are seen as being optimistic and non-critical.

C. Assessment dimensions that have significant correlations with Low Sick Leave Hours (building on previous data analyses):

- **NEW Patient** (SQ): Those with a high range score (more Patient) were significantly more likely to have a more favorable attendance score.
- **NEW Achievement-Focused** (WPP): Those with a high range score (more Achievement-Focused) were significantly more likely to have a more favorable attendance score.
- **Conformity** (WVA): Those with a high range score were significantly more likely to have a more favorable attendance score.
- **Calm** (WPP): Those with a high range score (more Calm) were significantly more likely to have a longer tenure.
- **Verbal Reasoning**: Those with a high range score were significantly more likely to have a more favorable attendance score.

D. Assessment dimensions that had significant correlations with **Passing the Training Milestone** (from previous analyses):

- **Patient** (SQ): Those with a high range score (more Patient) were significantly more likely to pass the Training Milestone.
- **Coachability** (WVA): Those with a high range score were significantly more likely to pass the Training Milestone.
- **Verbal Reasoning** (COGNITIVE): Those who score above average for making correct decisions based on verbal/written information were significantly more likely to pass the Training Milestone.

Recommended Next Steps:

- 1. Creation of a Customized Assessment Report Format** - Updated scoring of the assessments based on this data analysis will produce a customized report focusing on the critical dimensions for the organization. An updated TalentClick Fit Score ranging from 1 to 100 will indicate the likelihood of the person having on-the-job success and long tenure.
- 2. Organization should assess all candidates** using the updated assessment report to aid in selecting new hires and identify specific needs for training on a per candidate basis.
- 3. Further collection of job performance and attendance/tenure data** will enable follow-on data analyses to validate the assessment model and to provide opportunities for further refinement. Additional organizations may be invited to participate in on-going joint research (eg: other emergency communications organizations).

NOTE: We expect tenure to be longer during the COVID-19 situation because of the impact on the employment market so future analyses will need to take this into account.