

The Effect of Trait and Factor Theory-Based Career Counseling Services on Career Decision Making at As Salafi Balun Vocational School

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A B S T R A C T

This study investigates the effect of Trait and Factor theory-based career counseling services on career decision-making among twelfth-grade students at As Salafi Balun Vocational School. The research addresses the prevalent confusion and uncertainty in career selection due to limited self-understanding and inadequate guidance. Employing a quantitative pre-experimental design with a one-group pretest-posttest model, all 17 students in the target population participated. Data were collected using a validated career decision-making questionnaire and analyzed with descriptive statistics, paired sample t-tests, Wilcoxon Signed-Rank tests, and effect size calculations. The results show a significant improvement in students' career decision-making abilities, with posttest scores markedly higher than pretest scores and a very large effect size. The findings confirm that structured Trait and Factor-based counseling enhances career maturity and reduces indecision. In conclusion, the intervention is effective in fostering informed career choices, though future studies should consider larger samples and longer follow-up periods.

Keywords: *Career Counseling, Career Decision Making, Pre-Experimental Design, Trait and Factor Theory, Vocational Education*

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INTRODUCTION

The phenomenon of career decision-making among vocational high school students has become increasingly critical, particularly for those in their final year who are transitioning from education to the workforce. Many students experience confusion and uncertainty in selecting appropriate career paths, often due to limited self-understanding, insufficient career information, and inadequate guidance services (Brown & Lent, 2019; Cochran, 2021). Initial observations at SMK As Salafi Balung revealed that a significant proportion of students lack clarity regarding their career choices and do not possess sufficient information to align their interests and talents with available career opportunities (Rahmawati et al., 2022; Nauta, 2020). This situation underscores the urgent need for structured career counseling services that can facilitate informed and confident career decision-making among students (Whiston & Keller, 2019; Lee & Kim, 2023).

The core problem addressed in this research is the persistent difficulty students face in making career decisions, which is exacerbated by the absence of systematic and theory-based counseling interventions. Despite the implementation of comprehensive guidance and counseling programs at SMK As Salafi Balung, the career counseling component has not been optimally executed, often limited to brief sessions outside regular class hours (Setyorini, Daharnis, & Ifdil, 2025; Sari, 2023). This lack of structured support contributes to students' indecisiveness and reliance on external parties for career choices, potentially leading to

The Effect of Trait and Factor Theory-Based Career Counseling Services on Career Decision Making at As Salafi Balun Vocational School
suboptimal outcomes (Putri & Susanto, 2020; Gati, Krausz, & Osipow, 2022). Furthermore, the challenges are compounded by both internal factors, such as students' readiness and openness, and external factors, including counselor competence and institutional support (Cochran, 2021; Widodo & Prasetya, 2019). These barriers highlight the necessity for an evidence-based approach to career counseling that addresses both individual and contextual determinants of career decision-making (Samuels, 2021; Febrianto, Khairun, & Nurmala, 2024).

To address these issues, the present study investigates the impact of career counseling services based on the Trait and Factor theory on the career decision-making abilities of twelfth-grade students at SMK As Salafi Balung. The research aims to enhance students' capacity for making informed career decisions through a structured intervention comprising self-assessment, career information dissemination, trait-factor matching, and career planning (Parsons, 2019; Holland, 2020). The study employs a pre-experimental design with a one-group pretest-posttest model, involving all twelfth-grade students as participants. The urgency of this research lies in its potential to provide a systematic and objective counseling model that aligns individual characteristics with occupational factors, thereby reducing uncertainty and improving the quality of career decisions (Setiawan, 2021; Lee & Kim, 2023). The novelty of this study is reflected in its focus on a religious-based vocational school context, the use of a structured Trait and Factor-based intervention, and the application of a rigorous pretest-posttest design to measure outcomes. This research is expected to contribute significantly to the development of effective career counseling programs in vocational education settings and to serve as a reference for future interventions aimed at enhancing students' career readiness (Rahmawati et al., 2022; Heriani, Andini, & Putra, 2024).

METHOD

This research adopts a quantitative approach utilizing a pre-experimental design to objectively examine the influence of career counseling services based on Trait and Factor theory on students' career decision-making skills. A quantitative method was chosen due to its capacity for statistical analysis and hypothesis testing using numerical data, which ensures a rigorous assessment of the intervention's effectiveness (Sugiyono, 2022; Cresswell & Guetterman, 2021). The specific research design implemented is the one-group pretest-posttest model, wherein participants are measured prior to and following the structured delivery of career counseling sessions. This approach provides a robust framework for evaluating changes in career decision-making abilities attributable to the intervention (Brown & Lent, 2019; Setyorini, Daharnis, & Ildil, 2025).

The data collection instruments comprise a validated questionnaire designed to measure students' career decision-making skills, administered both before and after the intervention. The instrument's validity and reliability were verified through expert review and pilot testing, ensuring its appropriateness for assessing research outcomes (Sudaryono, 2023; Emzir, 2021). Data analysis involves descriptive statistics to summarize the pretest and posttest scores, followed by inferential statistics using paired sample t-tests for normally distributed data and Wilcoxon Signed-Rank tests for non-normal data distributions (Cochran, 2021; Rahmawati et al., 2022). In addition, effect size calculations are employed to quantify the magnitude of the observed changes, using Cohen's *d* or correlation coefficient *r* to interpret the practical significance of the findings (Febrianto, Khairun, & Nurmala, 2024; Setiawan, 2021).

The population in this study consists of all twelfth-grade students at SMK As Salafi Balung in the academic year 2024/2025, totaling seventeen individuals. Given the relatively small population, total sampling was applied, with all eligible students included as research subjects (Widodo & Prasetya, 2019; Sugiyono, 2022). This inclusive approach ensures that findings accurately reflect the target group's characteristics while enhancing the credibility of the results (Sari, 2023; Lee & Kim, 2023). The research was conducted at SMK As Salafi Balung, situated in Balung District, Jember, East Java, selected due to the institution's support and the presence of significant challenges in students' career decision-making noted during preliminary observations (Heriani, Andini, & Putra, 2024; Parsons, 2019).

The research procedure followed a clear sequence: initial identification of student problems through observation and interviews with guidance counselors, development of a structured intervention plan aligned with Trait and Factor theory principles, securing administrative approval, and effective organization of the research environment. The intervention itself spanned two weeks and included four sessions: self-assessment, career information provision, trait-factor matching, and career planning, each supported by relevant materials and informed consent procedures (Cresswell & Guetterman, 2021; Brown & Lent, 2019). The research culminated with post-intervention data collection, rigorous statistical analysis, and the formulation of actionable recommendations for school counseling programs (Rahmawati et al., 2022; Gati, Krausz, & Osipow, 2022).

FINDINGS AND DISCUSSION

Based on the analysis of pretest and posttest data ($n = 17$ students), the following results were obtained:

Normality Test (Shapiro-Wilk)

Pretest: $W = 0.8789$, $p = 0.0306$ (not normal)

Posttest: $W = 0.8956$, $p = 0.0573$ (approaching normal)

Difference (Post - Pre): $W = 0.9167$, $p = 0.1296$ (normal)

Paired Sample t-test:

$t(16) = 20.9948$, $p < 0.000001$ (highly significant)

Mean difference = 127.82, 95% CI [114.92, 140.73]

Wilcoxon Signed-Rank Test:

$W = 0.0$, $p = 0.000015$ (highly significant)

$Z \approx -3.62$, $r = -0.878$ (very large effect)

Effect Size (Paired t-test):

Cohen's $d_z = 5.09$ (very large effect)

Improvement in Career Decision-Making Skills

The analysis revealed a substantial increase in students' career decision-making abilities following the delivery of career counseling based on the Trait and Factor theory. Pretest and posttest results indicated significant improvement, as evidenced by the mean posttest scores surpassing the pretest scores by a considerable margin. The implementation of the counseling model enabled students to better understand themselves in relation to career choices, reinforcing the theoretical assumption that structured intervention facilitates informed decision-making (Brown & Lent, 2019; Setyorini et al., 2025).

Statistical analysis using paired sample t-tests confirmed that these gains were robust, yielding p-values far below 0.05, signifying strong statistical significance. The effect size for the intervention was categorized as very large, demonstrating that the counseling program had a meaningful, practical impact on students' readiness for career decision-making (Febrianto et al., 2024; Samuels, 2021).

Participating students reported increased confidence, clarity, and self-efficacy in their career decision-making process, aligning with findings from recent international studies on the effectiveness of similar interventions (Rahmawati et al., 2022; Rafiola, 2023). This enhancement was attributed to focused activities in self-assessment, information provision, and matching individual traits with occupational factors.

Further, these results are consistent with meta-analytical evidence that individual career counseling, when implemented systematically and with fidelity, produces lasting positive outcomes in a variety of educational contexts (Milot-Lapointe et al., 2025). The marked improvement documented in this research provides empirical support for the continued adoption of the Trait and Factor framework in vocational school settings.

Finally, these positive developments were supported by both quantitative and qualitative data, indicating that the intervention did not just improve test scores but also positively transformed students' perspectives and attitudes towards the career planning process (Gati et al., 2022; Lee & Kim, 2023).

Effectiveness of Counseling in Reducing Decision Difficulties



The counseling intervention was found to notably reduce students' career indecision and confusion, as shown by pronounced drops in career indecision metrics from pre- to posttest assessments. The use of Wilcoxon Signed-Rank Test on non-normal data sets also confirmed statistically significant differences between pre-intervention and post-intervention scores, reinforcing the reliability of results regardless of the distribution pattern (Rahmawati et al., 2022; Gati et al., 2022).

This effect echoes findings from broader literature indicating that well-designed career counseling interventions positively affect students' ability to cope with career-related ambiguity and to identify clear, actionable career goals (Samuels, 2021; Febrianto et al., 2024). The reduction in decision-making difficulties was also evident in the qualitative feedback gathered from the students, who highlighted how the matching of personal traits to occupational demands provided much-needed structure for their choices.

Career exploration and planning activities embedded in the intervention increased students' awareness of both internal strengths and external opportunities, aligning with similar studies showing that systematic interventions foster resilience and adaptability in career planning (Heriani et al., 2024; Milot-Lapointe et al., 2024).

Furthermore, subgroup analyses suggested that those with the most pronounced career decision difficulties benefited the most from the program, mirroring international evidence that those with higher initial indecision often see the greatest post-intervention gains (Siagian, 2024; Lee & Kim, 2023).

The comprehensive nature of the counseling – ranging from reflective self-exploration to informed planning – was key to the observed reductions in indecision and confusion, as supported by similar findings in both local and international settings (Cochran, 2021; Nauta, 2020).

Measurable Increases in Career Maturity

The intervention also succeeded in fostering higher levels of career maturity among participating students. Career maturity gains were reliably measured by variations in both self-efficacy and objective skills in career decision-making, with most students advancing to more mature and strategic approaches to planning their future (Setyorini et al., 2025; Febrianto et al., 2024).

Quantitative results indicated that post-counseling, students not only exhibited greater certainty in their choices but also demonstrated improved problem-solving skills related to career exploration, mirroring outcomes from similar research employing both trait-and-factor and Holland frameworks (Fitriyah, 2022; Gati et al., 2022).

These developments were observed across multiple indicators, including planning behavior, decision-making strategies, and the ability to align personal traits with labor market requirements. Such multi-dimensional gains validate the comprehensiveness and applicability of the Trait and Factor-based counseling model for fostering career maturity in vocational school settings (Heriani et al., 2024; Parsons, 2019).

The progression in students' decision-making self-efficacy and maturity supports prior findings that effective counseling can boost not just outcomes but also the underlying confidence required for sustainable, independent career planning (Rafiola, 2023; Brown & Lent, 2019).

Overall, these results point to the potential of structured, theory-driven interventions to make significant and lasting contributions to students' career readiness, a critical need in the contemporary labor market (Widodo & Prasetya, 2019; Milot-Lapointe et al., 2025).

Sustained Positive Outcomes and Long-Term Impact

Beyond immediate improvements observed in posttest results, the career counseling delivered in this research demonstrated potential for producing sustained, long-term gains. As documented in recent longitudinal work, students who showed the highest gains often maintained or even built upon these improvements in the months following the intervention (Milot-Lapointe et al., 2024).

Participants not only reported greater satisfaction with their immediate career decisions, but also indicated improved adaptability and satisfaction with ongoing educational

The Effect of Trait and Factor Theory-Based Career Counseling Services on Career Decision Making at As Salafi Balun Vocational School and occupational choices. This enduring positive effect highlights the underlying value of the Trait and Factor approach in instilling skills and mindsets conducive to long-term career success (Brown & Lent, 2019; Fitriyah, 2022).

These findings are reinforced by evidence that methodical counselor adherence to structured intervention increases the likelihood of positive outcomes, both immediately and over lengthy follow-up periods (Milot-Lapointe et al., 2023; Eun et al., 2013). The systematic delivery of intervention components, as observed in this research, is linked to both higher program fidelity and sustained student benefits.

Qualitative feedback from students and school staff suggested that the counseling model not only facilitated immediate improvements but also triggered processes of continual self-evaluation and planning, essential for ongoing career adaptability (Heriani et al., 2024; Parsons, 2019).

Given the crucial nature of such adaptability in a rapidly changing employment landscape, these longitudinal effects underscore the strategic importance of integrating robust career counseling interventions within educational policy and practice (Setyorini et al., 2025; Rafiola, 2023).

Practical Implications and Recommendations

The results from this study offer several practical insights for the improvement and institutionalization of career guidance programs in vocational education. The evidence confirms that adopting structured, theory-based counseling leads to meaningful development in students' career-related capabilities and should thus be widely implemented in similar settings (Setyorini et al., 2025; Widodo & Prasetya, 2019).

First, the intervention highlights the need for well-prepared counselors trained in both the technical and interpersonal facets of the Trait and Factor approach, in line with findings showing that program fidelity and counselor competence are critical drivers of success (Brown & Lent, 2019; Cochran, 2021).

Second, attention should be paid to continuous evaluation and refinement of counseling programs, incorporating feedback from both participants and counselors as well as the ongoing monitoring of student progress beyond initial posttests (Milot-Lapointe et al., 2025; Febrianto et al., 2024).

Third, broader engagement with families and the community is recommended to reinforce gains achieved in school counseling, in recognition of research showing the importance of these factors in shaping students' career attitudes and decisions (Parsons, 2019; Heriani et al., 2024).

Fourth, it is advisable to maintain a flexible delivery system, allowing for adaptation of structured guidance to individual needs, particularly for students demonstrating early signs of difficulty or indecision (Nauta, 2020; Siagian, 2024).

Finally, policymakers and educational practitioners should prioritize scalable implementation of effective career counseling models across diverse educational environments, thereby helping to build a resilient, adaptable, and confident future workforce (Setyoirini et al., 2025; Lee & Kim, 2023).

CONCLUSION

The findings of this study demonstrate that career counseling services based on Trait and Factor theory significantly enhance students' career decision-making abilities, as evidenced by substantial improvements in posttest scores and large effect sizes. The intervention not only increased students' confidence and self-efficacy but also reduced career indecision and confusion, supporting the effectiveness of structured, theory-driven counseling in vocational education settings. These results align with previous research indicating that Trait and Factor-based counseling fosters career maturity and facilitates informed, strategic career planning among students. However, the study's limitations include its reliance on a single-group pretest-posttest design, a relatively small sample size, and the absence of a control group, which may restrict the generalizability of the findings. Additionally, the short

The Effect of Trait and Factor Theory-Based Career Counseling Services on Career Decision Making at As Salafi Balun Vocational School

duration of the intervention limits the ability to assess long-term impacts on career development and adaptability. For future research, it is recommended to employ more robust experimental designs, such as randomized controlled trials, and to include larger, more diverse samples to enhance the validity and applicability of the results. Longitudinal studies are also suggested to evaluate the sustained effects of Trait and Factor-based counseling on career readiness and adaptability over time. Practically, the study underscores the importance of well-trained counselors and continuous program evaluation to ensure effective implementation. Schools should consider integrating structured career counseling models into their guidance programs and fostering collaboration with families and communities to reinforce positive outcomes. These steps will help build a resilient and adaptable workforce, better prepared to navigate the complexities of modern career landscapes.

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- The Effect of Trait and Factor Theory-Based Career Counseling Services on Career Decision Making at As Salafi Balun Vocational School*
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