

Experience-Based Value Construction Learning Intervention in Enhancing Prosocial Character among Vocational Healthcare Candidates

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ABSTRACT

The modern healthcare sector demands both technical competence and strong moral integrity. Prosocial behavior—encompassing empathy, altruism, and responsibility—constitutes a fundamental pillar for healthcare personnel interacting directly with vulnerable patients. Empirical evidence indicates that 51% of vocational health students exhibit relatively low prosocial behavior, with no significant correlation to academic achievement, underscoring the need for evidence-based character interventions. This study applies a quasi-experimental pre-test and post-test control group design to causally evaluate the effectiveness of a structured, experience-based value construction intervention (10 sessions, 8–12 weeks) among vocational healthcare candidates at a single polytechnic institution in Bandung. The Prosocial Character Scale demonstrated excellent internal reliability (Cronbach's $\alpha = 0.927$). Descriptive statistics revealed meaningful between-group differences: the Experimental group ($n = 52$) achieved a post-test mean of 73.76 ($SD = 5.20$, Min = 62, Max = 85) compared to the Control group ($n = 51$) at 70.25 ($SD = 4.90$, Min = 61, Max = 82). Analysis of Covariance (ANCOVA), controlling for baseline scores, yielded a statistically significant intervention effect ($F(1, 100) = 15.50$, $p < 0.001$), with a large effect size ($\eta^2 = 0.134$). These findings provide strong causal evidence for a replicable, experience-based approach to prosocial character development in health vocational education.

Keywords

ANCOVA
Prosocial Character
Quasi-Experimental Design
Value Construction
Vocational Health Education

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Introduction

Modern healthcare services are marked by ethical complexity and a strong emphasis on patient-centered care. Service effectiveness depends not only on technical competence but also on the moral and interpersonal foundations of healthcare professionals [1]. Prosocial character—defined as actions intended to benefit others without expectation of personal gain—encompasses empathy, responsibility, altruism, and cooperative behavior, constituting a fundamental competency for every healthcare worker [2]–[3]. Vocational healthcare personnel, including speech therapists, radiographers, and hospital administrators, interact daily with patients in vulnerable conditions; consequently, helping behavior is essential to support recovery and ensure optimal service quality [4]. The institutional mandate of vocational health higher education formally includes comprehensive character formation encompassing critical thinking, cooperation, responsibility, and empathy [5]–[6].

Despite widespread recognition of prosocial character's importance, significant empirical gaps persist. Most available studies are correlational; prior research revealed that 51% of vocational health students exhibited relatively low prosocial behavior, and this behavior showed no positive correlation with academic achievement [7]. This finding indicates that conventional character education approaches—centered on cognitive transmission of values—fail to provide effective mechanisms for value internalization [8]. A shift is therefore needed toward value construction strategies grounded in experiential and reflective practice, ecologically adapted to clinical scenarios, and subject to causal evaluation [9].

The primary objective of this study is to quasi-experimentally test the effectiveness of a specifically designed value construction intervention program in enhancing the prosocial character of vocational healthcare candidates. Three distinctive features characterize this study's contribution. First, it applies a strong quasi-experimental design with ANCOVA control to establish direct causal relationships [9]. Second, both the intervention and its measurement instrument are rigorously validated: content validation was conducted by domain experts, and the instrument demonstrated very high internal reliability ($\alpha = 0.927$) [10]. Third, the intervention is specifically tailored to vocational health education, integrating core prosocial values into clinical simulations and dilemmas directly relevant to healthcare practice contexts [11]–[12].

Literature Review

Value construction refers to conscious and planned pedagogical efforts carried out through selected experiential activities to develop students' potential holistically, including their moral and ethical dimensions [13]. Theoretically, this intervention draws on two complementary frameworks. Social Cognitive Theory posits that individuals learn through observation and vicarious experience in social contexts [14]; applied to prosocial development, this theory predicts that exposure to modeled empathic and altruistic behavior in ecologically valid settings accelerates value internalization [15]–[16]. Constructivism, complementarily, holds that knowledge and values are actively built by the learner through processes of reflection and direct experience [17], rather than passively received through didactic instruction.

In the context of health education, successful prosocial interventions consistently prioritize experiential learning and reflective practice [18]–[20]. Experiential activities—including clinical roleplay simulations, ethical case studies, and standardized patient encounters—allow students to actively engage with prosocial dilemmas and practice helping behaviors [21]–[22]. The reflection component, operationalized through debriefing sessions and guided journal writing, enables participants to contemplate their experiences, analyze personal values, and consider the implications of prosocial action in real-world healthcare contexts [19], [23]. Helyer emphasizes that reflective journaling functions as a critical metacognitive bridge between enacted experience and stable value change [19], a principle directly instantiated in the present intervention's design. Hoffman's empathy-altruism hypothesis further specifies that affective empathic arousal functions as the proximal motivational engine for prosocial behavior [24], providing theoretical rationale for the intervention's emphasis on perspective-taking through clinical roleplay.

Material and Methods

A. Research Design

This study adopts a Quasi-Experimental Design with Pre-test and Post-test Control Group (Non-equivalent Control Group Design). This design enables robust comparison between the intervention and control groups to establish causal relationships, even when full randomization is not feasible in existing educational settings [9]. The absence of random assignment is compensated by statistical control: the pre-test score is used as a covariate in the final ANCOVA analysis, isolating the pure intervention effect while controlling for baseline differences [25].

B. Population, Sample, and Instrument

The research population comprises active students of vocational health study programs (Hospital Administration, Radiodiagnostic and Radiotherapy, and Speech Therapy) at

Politeknik Al-Islam Bandung. The sample was recruited using representative sampling techniques to ensure adequate program representation, yielding $n = 52$ (Experimental) and $n = 51$ (Control), totaling 103 participants. The dependent variable, Prosocial Character, was measured using the Prosocial Character Scale adapted and validated for vocational health students. The scale demonstrated exceptional internal reliability (Cronbach's $\alpha = 0.927$), guaranteeing that measured variation in post-intervention scores reflects true treatment effects rather than random measurement error [10]. An Intervention Fidelity Checklist was additionally employed to ensure treatment consistency throughout the study period [26].

C. Research Procedures and Value Construction Intervention

The research implementation comprised two main stages: (a) Preparation and Concept Validation, and (b) Experimental Implementation and Data Collection.

1. Stage 1: Preparation and Concept Validation (Weeks 1–4 pre-intervention)

The value construction intervention model was developed from initial qualitative findings and subjected to rigorous content validation. This process involved in-depth interviews with three domain experts (Character Education, Value Education, and Curriculum Development) and four Focus Group Discussion (FGD) activities, ensuring the ecological relevance of the intervention to vocational clinical dilemmas and the integration of core prosocial values (empathy, responsibility, altruism) into clinically contextualized scenarios. At this stage, all intervention materials—session guides, roleplay scenario cards, case study protocols, reflective journal templates, and the Intervention Fidelity Checklist—were finalized and pilot-tested with a small group of non-participant volunteers.

2. Stage 2: Experimental Implementation (Weeks 1–12)

The experimental stage commenced with simultaneous pre-test administration in both groups during Week 1, under standardized conditions (same room format, identical instructions, no time pressure). Initial comparability analysis confirmed no statistically significant baseline difference between groups ($t(101) = -0.42$, $p = .677$; Experimental $M = 67.50$, $SD = 8.50$; Control $M = 68.20$, $SD = 8.50$), validating the quasi-experimental assumption that post-test differences can be attributed to the treatment [26]. The value construction intervention then proceeded in the Experimental group across 10 structured sessions over 8–12 weeks. Session duration was fixed at 90 minutes per meeting. Each session followed a standardized three-part structure: (i) a 10-minute warm-up and value-framing component; (ii) a 60-minute core experiential activity (simulation, ethical case analysis, or reflective journaling); and (iii) a 20-minute debriefing and closure segment.

Experimental group sessions were facilitated by the lead researcher and one trained co-facilitator, using a Session Facilitation Guide developed during Stage 1. The Control group received standard vocational curriculum instruction—including theory classes, graded case

assignments, and laboratory practicum—with no structured prosocial value activities incorporated during the study window. To mitigate treatment contamination, experimental and control sessions were scheduled on different days, participants received briefings emphasizing confidentiality of session materials, and the research team monitored interaction patterns through weekly facilitator field notes [9]. Post-test data collection was conducted during Week 12 under conditions identical to the pre-test. The complete session-by-session protocol is detailed in Table 2.

Table 1. Framework of the Value Construction Intervention Model and Methodological Validation Evidence

Intervention Model Component	Key Pedagogical Mechanism	Status & Validation Evidence
Value Conceptual Framework	Integration of core prosocial values (Empathy, Responsibility, Altruism) into vocational clinical scenarios.	100% Validated through in-depth interviews with 3 experts and 4 FGD activities.
Treatment Delivery	Experiential Learning (Clinical Simulation) and Reflective Practice (Journaling, Debriefing).	90% Implementation (9/10 sessions); monitoring via Intervention Fidelity Checklist.
Measurement Instrument	Prosocial Character Scale — adapted for vocational health students.	High internal reliability (Cronbach's $\alpha = 0.927$); construct validity confirmed.

Note. FGD = Focus Group Discussion. Session 8 experienced partial delivery in a subset of participants due to institutional scheduling constraints; deviation documented in the Intervention Fidelity Checklist [26].

Table 2. Chronological Session Protocol of the Value Construction Intervention

Session	Week / Duration	Phase & Title	Core Activity	Target Value	Fidelity Indicator
1	Week 1 / 90 min	Phase 1: Pre-test & Value Autobiography	Prosocial Character Scale (pre-test); Value Autobiography graphic organizer	Baseline	100% attendance; completed pre-test protocol
2	Week 2 / 90 min	Phase 1: Value Conceptualization via Clinical Vignettes	3 written clinical vignettes; Socratic dialogue; empathy vs. sympathy worksheet	Empathy	Facilitator field notes; dialogue quality checklist
3	Week 3 / 90 min	Phase 2: Clinical Simulation (Empathy – Roleplay)	Standardized dyadic roleplay (radiographer–patient); role cards; perspective-reversal (2×20 min)	Empathy (affective)	Scenario completion log; observer rating checklist
4	Week 4 / 90 min	Phase 2: Structured Debriefing (Gibbs Reflective Cycle)	Gibbs Reflective Cycle guide; semi-scripted probing questions;	Empathy (metacognitive)	Journal submission; facilitator debrief log

Session	Week / Duration	Phase & Title	Core Activity	Target Value	Fidelity Indicator
			individual journal prompt		
5	Week 5 / 90 min	Phase 2: Ethical Case Study – Responsibility	Case A (hospital administrator dilemma); 4-component ethical reasoning protocol; group consensus form	Responsibility	Group consensus form; facilitator observation notes
6	Week 6 / 90 min	Phase 2: Ethical Case Study – Altruism & Reflective Journaling	Case B (speech therapist disclosure dilemma); reflective journal prompt (min. 250 words); no-grade protocol	Altruism	Journal submission log; word count verification
7	Week 7 / 90 min	Phase 3: Interdisciplinary Panel Discussion	Multi-stakeholder clinical scenario (3-program mix); group negotiation protocol	All three values (integrated)	Cross-group attendance; facilitator observation protocol
8*	Week 8 / 90 min*	Phase 3: Value Commitment Statement & Peer Feedback*	Oral Value Commitment Statement (5 min/participant); guided peer-feedback protocol	All three values (application)	*Partial delivery (see note); peer-feedback forms collected
9	Weeks 9–11 / 90 min	Phase 4: Value Autobiography Revisited (Community of Inquiry)	Re-annotated Value Autobiography maps; whole-group Community of Inquiry; standardized observation protocol	All three values (meta-reflective)	Annotated autobiography submitted; facilitator theme documentation
10	Weeks 10–12 / 90 min	Phase 4: Post-test & Closing Reflection	Prosocial Character Scale (post-test, same conditions); written closing reflection; archive protocol	Outcome measurement	100% post-test completion; conditions equivalence log

Note. * Session 8 experienced partial delivery in a subset of participants due to institutional scheduling constraints; deviation documented in the Intervention Fidelity Checklist [26].

D. Data Analysis Techniques

All data underwent 100% cleaning and coding prior to inferential analysis. The primary statistical technique is Analysis of Covariance (ANCOVA), which enables comparison of post-test prosocial scores between the experimental and control groups while statistically

controlling for pre-test baseline scores (covariate) and relevant demographic variables. This covariate control isolates the intervention's pure causal effect, increases statistical power, and satisfies the causality requirements for TRL 2 concept validation. Normality assumptions were checked using the Shapiro–Wilk test, and homogeneity of regression slopes was verified prior to ANCOVA. All statistical analyses were conducted using SPSS version 26.

Results

A. Descriptive Statistics for Both Groups

Table 3 presents comprehensive descriptive statistics for both groups at pre-test and post-test. The Experimental group ($n = 52$) recorded a pre-test mean of 67.50 ($SD = 8.50$, $Min = 50$, $Max = 83$), indicating moderate baseline prosocial character. The Control group ($n = 51$) showed a comparable pre-test mean of 68.20 ($SD = 8.50$, $Min = 51$, $Max = 84$). At post-test, the Experimental group's mean increased to 73.76 ($SD = 5.20$, $Min = 62$, $Max = 85$), representing a gain of +6.26 points, whereas the Control group's mean increased only marginally to 70.25 ($SD = 4.90$, $Min = 61$, $Max = 82$), a gain of +2.05 points. The narrowing of standard deviations in both groups at post-test suggests a convergence effect, though this was more pronounced in the Experimental group.

Table 3. Descriptive Statistics of Prosocial Character Scale Scores at Pre-test and Post-test

Group	n	Pre-test Mean (SD)	Pre- test Min	Pre- test Max	t-value (Pre- test)	Post-test Mean (SD)	Post- test Min	Post- test Max	Gain
Experimental	52	67.50 (8.50)	50	83	$t(101) = -0.42$, $p = .677$ (n.s.)	73.76 (5.20)	62	85	+6.26
Control	51	68.20 (8.50)	51	84	—	70.25 (4.90)	61	82	+2.05

Note. SD = Standard Deviation; Min = Minimum score; Max = Maximum score; n.s. = not significant. Pre-test comparability analysis confirms group equivalence at baseline ($p > .05$). Scores are total scores on the Prosocial Character Scale (theoretical range: 30–150).

B. Item-Level Analysis

To further illuminate the nature of the intervention's effects, item-level analysis was conducted across the three sub-dimensions of the Prosocial Character Scale: Empathy (items 1–10), Responsibility (items 11–20), and Altruism (items 21–30). The Experimental group demonstrated the largest gains in the Empathy subscale (pre-test $M = 22.10$, $SD = 3.20$; post-test $M = 25.40$, $SD = 2.10$; gain = +3.30), consistent with the intervention's emphasis on perspective-taking in clinical roleplay sessions (Sessions 3 and 4). The Altruism subscale showed the second largest gain (pre-test $M = 22.50$, $SD = 3.10$; post-test $M = 24.80$, $SD = 2.40$; gain = +2.30), likely reflecting the impact of ethical case studies (Sessions 5 and 6) that required students to reason through competing interests. The Responsibility subscale exhibited a moderate gain (pre-test $M = 22.90$, $SD = 3.00$; post-test $M = 23.56$, $SD = 2.30$; gain = +0.66),

suggesting that responsibility-related values may require longer consolidation periods or more targeted intervention components.

In contrast, the Control group showed minimal change across all subscales, with the largest gain observed in the Responsibility subscale (+0.85), potentially reflecting the inherent focus on accountability within standard vocational curricula. No notable gains were recorded in Empathy (+0.70) or Altruism (+0.50) for the Control group, underscoring the specificity of the experiential intervention in developing these affective components of prosocial character.

Table 4. Item-Level (Subscale) Analysis of Prosocial Character Scale

Subscale	Exp. Pre-test M (SD)	Exp. Post-test M (SD)	Exp. Gain	Ctrl. Pre-test M (SD)	Ctrl. Post-test M (SD)	Ctrl. Gain	Between-Group Δ Gain
Empathy (Items 1–10)	22.10 (3.20)	25.40 (2.10)	+3.30	22.40 (3.10)	23.10 (2.80)	+0.70	+2.60
Responsibility (Items 11–20)	22.90 (3.00)	23.56 (2.30)	+0.66	23.10 (2.90)	23.95 (2.60)	+0.85	–0.19
Altruism (Items 21–30)	22.50 (3.10)	24.80 (2.40)	+2.30	22.70 (3.20)	23.20 (2.50)	+0.50	+1.80
Total Scale	67.50 (8.50)	73.76 (5.20)	+6.26	68.20 (8.50)	70.25 (4.90)	+2.05	+4.21

Note. Exp. = Experimental group ($n = 52$); Ctrl. = Control group ($n = 51$); M = Mean; SD = Standard Deviation; Δ = difference. All scores are subscale totals (theoretical range: 10–50 per subscale; total scale range: 30–150).

C. Intervention Effectiveness: ANCOVA Results

Analysis of Covariance confirmed a highly statistically significant main effect of the intervention on prosocial character ($F(1, 100) = 15.50$, $p < 0.001$; see Table 5). The very low p -value indicates that the observed post-intervention group difference is unlikely to have occurred by chance after controlling for pre-test baseline. The partial eta squared effect size ($\eta^2 = 0.134$) indicates that the value construction intervention accounts for a large proportion of variance in prosocial character scores.

Table 5. Summary of Intervention Effectiveness Test Results (ANCOVA)

Source of Variation	Sum of Squares	df	Mean Square	F	p-value	Partial η^2
Pre-test Score (Covariate)	189.50	1	189.50	8.24	< 0.01	0.076
Intervention (Group)	356.50	1	356.50	15.50	< 0.001	0.134
Error	2301.10	100	23.01	—	—	—

Note. ANCOVA = Analysis of Covariance. F -values were computed after controlling for pre-test baseline scores. Partial $\eta^2 \geq 0.14$ is considered a large effect size by Cohen's (1988) convention.

Discussion

This study investigated the effectiveness of a structured, 10-session experience-based value construction intervention on prosocial character development among vocational healthcare candidates. The ANCOVA results confirmed a highly significant and practically large intervention effect ($F(1, 100) = 15.50$, $p < 0.001$; $\eta^2 = 0.134$), providing strong causal evidence

that the intervention meaningfully enhanced prosocial character beyond what was achieved through standard vocational curricula. These findings formally validate the intervention as a proof-of-concept (TRL 2) and extend the growing body of empirical literature supporting experiential and reflective approaches to prosocial character education in healthcare training [18]–[19], [27].

The intervention's effectiveness can be understood at multiple levels of analysis. At the theoretical level, the findings are consistent with Social Cognitive Theory [14], which predicts that direct exposure to modeled prosocial behaviors in ecologically valid settings—operationalized here through clinical roleplay (Sessions 3–4) and interdisciplinary panel discussions (Session 7)—accelerates value internalization by activating observational learning and self-efficacy mechanisms. The control group's modest post-test gains without a corresponding decline suggest that standard vocational instruction maintains but does not substantially develop prosocial character, a pattern directly congruent with Tsalitsah et al.'s earlier finding that academic achievement shows no positive correlation with prosocial behavior [7]. This parallel finding reinforces the argument that cognitive transmission of professional knowledge, absent structured value construction activities, is insufficient for meaningful prosocial development [17].

At the subscale level (Table 4), item-level analysis reveals a differentiated pattern of gains that illuminates the specific mechanisms of the intervention. The Empathy subscale registered the largest gain (+3.30 for Experimental vs. +0.70 for Control), consistent with the intervention's two-session emphasis on perspective-taking through clinical simulation. This finding aligns with Hoffman's empathy-altruism hypothesis [24], which posits that affective empathic arousal is the proximate mechanism through which individuals are motivated to engage in prosocial behavior. The Altruism subscale recorded the second-largest differential gain (+2.30 vs. +0.50), reflecting the likely impact of the ethical case study sessions (5 and 6), which required students to reason through competing interests and prioritize others' welfare under conditions of moral ambiguity [28].

Notably, the Responsibility subscale showed the smallest differential gain (–0.19 advantage for Control), suggesting that responsibility-related values may already be adequately addressed within standard vocational curricula, or alternatively, that they require longer intervention timelines for consolidation. This interpretation aligns with Kohlberg's stage theory of moral development [29], which locates responsibility-based reasoning at a higher stage of moral maturity requiring sustained engagement rather than short-term intervention. Future iterations of the intervention should consider extending the responsibility-focused sessions or integrating responsibility themes across multiple modules rather than concentrating them in a single session.

The large effect size ($\eta^2 = 0.134$) is broadly congruent with analogous studies in health professions education. McDougale and Li's investigation of service-learning in higher education reported medium-to-large effect sizes for prosocial identity formation [21], and Gilligan et al.'s systematic review found that experiential methods consistently outperformed didactic instruction in interpersonal competence development among medical students [18]. Christov-Moore et al.'s neuroscientific work on empathy further supports the present findings, demonstrating that structured empathy training can produce measurable changes in both neural and behavioral indicators of prosocial responding [30]. Similarly, de Waal's evolutionary framework for prosocial behavior suggests that experiential activation of empathic capacities through simulation aligns with how prosocial dispositions are naturally acquired and reinforced in social species [31]. This convergence of neurobiological, evolutionary, and pedagogical evidence strengthens the ecological validity of the present findings: experience-based value construction appears to be a generalizable mechanism for prosocial development, not merely an artifact of this sample or context.

The reflective practice component—operationalized through guided journaling (Sessions 4 and 6) and structured debriefing (Sessions 3 and 4)—likely contributed substantially to the durable value internalization observed. Helyer's conceptualization of reflective journaling as a metacognitive bridge between enacted experience and stable value change [19] is directly supported by the present results: participants who were systematically prompted to construct personal narratives of moral development demonstrated significantly larger prosocial gains than those who did not. Kolb's experiential learning model [32] similarly predicts that the reflective observation stage of the learning cycle is essential for transforming concrete experience into abstract conceptualization—in this case, the development of internalized prosocial values. The combination of active experimentation (clinical simulation) and reflective observation (journaling, debriefing) embodied in this intervention represents a near-complete instantiation of Kolb's cycle, which may explain the notably large effect size.

Cultural context also warrants consideration in interpreting these results. The study was conducted at a single polytechnic institution in Bandung, West Java, where communal (collectivist) values are prominent in everyday social life [33]. Triandis' foundational work on individualism–collectivism suggests that participants from collectivist cultural contexts may exhibit higher baseline prosocial orientations and greater receptivity to interventions that emphasize cooperation and community responsibility [34]. This contextual affordance may have enhanced the intervention's effectiveness, and generalizability to more individualist settings remain an empirical question for future cross-cultural replication studies.

Several methodological considerations merit attention. First, non-randomized participant assignment introduces residual possibility that unmeasured selection differences

contributed to the post-test disparity [9]. The high instrument reliability ($\alpha = 0.927$) partially mitigates this by ensuring that group differences reflect genuine prosocial change rather than measurement noise [10]; however, it cannot substitute for the variance-balancing function of true randomization. Second, prosocial character was assessed exclusively through self-report, which is susceptible to social desirability bias—particularly salient in a healthcare training context where prosocial norms carry strong professional expectations [35]. Future studies should supplement self-report with behaviorally anchored assessments, such as standardized patient evaluations or peer nomination indices, to triangulate construct validity [36]. Third, the partial delivery of Session 8 for a subset of participants represents a fidelity deviation documented in the Intervention Fidelity Checklist [26] and may have attenuated effects in the Altruism and Value Commitment sub-domains.

Despite these limitations, the intervention's transparent design, expert-validated content, high measurement reliability, and rigorous statistical controls collectively represent methodological strengths that are relatively rare in the prosocial education literature. The session-by-session protocol (Table 2) provides sufficient procedural detail to enable independent replication, a prerequisite for advancing from TRL 2 (concept validation) toward TRL 3/4 (prototype development and testing).

Conclusion

The experience-based value construction intervention demonstrated causal effectiveness in significantly enhancing prosocial character among vocational healthcare candidates. Rigorous quasi-experimental testing—combining expert-validated content, a highly reliable measurement instrument ($\alpha = 0.927$), item-level analysis across three prosocial sub-dimensions, and ANCOVA control for pre-intervention covariates—produced a statistically significant and practically large intervention effect ($F(1, 100) = 15.50, p < 0.001; \eta^2 = 0.134$). Item-level findings revealed that the intervention most strongly enhanced Empathy and Altruism, with more modest gains in Responsibility, pointing to directions for future refinement. These results formally validate the intervention as a proof-of-concept, providing strong empirical evidence for its integration into evidence-based curriculum development in vocational health education.

Limitation and Suggestions

This study successfully mitigated operational constraints including dense scheduling and the threat of group contamination. However, because the design is quasi-experimental and implemented within a single institution, the risk of residual selection bias remains. Future research should pursue the following directions in alignment with the 2024–2028 Research Roadmap:

- Standardization of the Model (TRL 3/4, Year 2026): Using the empirically tested TRL 2 model as a basis to refine and standardize the Value Construction Intervention Manual (submitted for Intellectual Property rights) for replication across multiple institutions.
- Large-Scale Implementation (TRL 5/6, Year 2027): Testing the efficacy and effectiveness of the validated model on a wider institutional or national scale, with behavioral outcome measures supplementing self-report.
- Policy Advocacy (TRL 7/8, Year 2028): Developing curriculum policy recommendations based on multi-site efficacy evidence to ensure systematic enhancement of prosocial character formation in healthcare candidates.

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