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Prosocial Motives to Serve in Rural Areas: An Exploratory Study Among Health Profession Education Students

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ABSTRACT

Healthcare professionals are presumed to have highly prosocial motives that drive them to serve their communities. Contrary to this presumption, in many countries, including Indonesia, reluctance to serve in remote and rural areas appears to persist among healthcare professionals. This phenomenological study aimed to explore in depth health professionals' perceptions of prosocial motives, their significance, and the factors that contribute to them, particularly in relation to their decisions to serve in rural areas. Using maximum variation sampling, this study recruited 17 health profession education (HPE) students as well as five related professionals (rural health workers and a social psychologist) as key informants. Data were obtained via two focus group discussions and seven in-depth interview sessions. Interview transcripts were semi-manually extracted using Prosa.ai© – an artificial intelligence (AI)-based software – and analysed using Braun and Clarke's six steps of thematic analysis. Four themes emerged: (a) conceptualisation of prosocial motives among HPE students and professionals regarding rural area service; (b) the significance of prosocial motives for rural health professionals; (c) hindering factors of prosocial motives in serving the rural areas; and (d) cultivating factors of prosocial motives in serving the rural areas. Prosocial motives may represent an important factor in retaining rural health workers, despite the challenges of practising in these areas. To achieve a sustainable distribution of rural health workers, collaboration between government and educational institutions is needed to develop rural health policies and curricula that cultivate prosocial motives among HPE students.

Keywords: *Prosocial motives, Rural area, Health profession education, Community service, Health policy*

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INTRODUCTION

The term 'prosocial' applies to any act intended to help others, regardless of an individual's motive. Theoretically, helping others may be driven by feelings of sympathy, leading an individual to try to ease others' hardships (1). Prosocial behaviours range from daily social

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behaviours to goal-oriented actions, such as volunteerism (2) and community service (3). Some have argued that prosocial motives are inherent in human nature, whereas others have claimed that they are, instead, the result of multiple influences, including social–environmental factors and personality-related characteristics (1). Prosocial motives may contribute to generating interest in helping others and acting on that interest (4).

Prosocial behaviours are preferred in several occupations, including healthcare professions. Healthcare professionals are generally willing to ease the burden of and treat sickness in others, which demands a high level of intrinsic prosocial motives (5). Cultivation of prosocial motives among healthcare workers has a positive impact on doctor–patient relationships and may increase the quality of patient care (6). Moreover, through prosocial actions, students in health professions can enhance their professional identity development (7), well-being (8) and empathy (9). Those with strong prosociality may develop a strong drive to volunteer (2) or even work in rural areas (3).

Thus, cultivating prosocial motivation among health professionals may help address the growing reluctance to serve in rural areas. Dasman et al. (10) found that new graduates of medical internships were reluctant to choose a professional career in a rural area. The same pattern also held among graduate medical specialists (11) and nursing students (3). In contrast, Getachew et al. (12) found that a high percentage (78.4%) of Indonesian health profession education (HPE) students expressed interest in serving in rural areas. Previous studies have described several factors that influence health professionals' reluctance to serve in rural areas, such as inadequate remuneration, limited career opportunities, inadequate infrastructure, sociocultural disparities, personal security threats, and familial interdependence (13,14).

This evidence of reluctance to serve in rural areas appears to contradict the assumption that healthcare professionals are highly prosocial and thus likely to have a community-oriented mindset (4,9). Although previous studies have indicated that cultivating prosociality is positively associated with students' personal and professional development (7–9), they have explored neither the relationship between HPE students' prosociality and their decision to serve in rural areas, nor the factors that cultivate such motives. This study aims to conceptualise prosocial motives regarding rural area service among rural health students and professionals, and to explore factors that hinder or cultivate prosocial motives for such decisions.

METHODS

Study Design

This research employs a qualitative study design using a phenomenological approach. It highlights diminished motivation among Indonesian HPE graduates to serve in rural areas as its primary phenomenon (10). A qualitative approach allows for a deep exploration of the underlying prosocial motivations among HPE students. Moreover, a qualitative approach enables us to identify factors related to students' prosocial motives as they pertain to their intentions regarding rural-area practice.

Research Participants

We employed a maximum variation sampling method to capture diverse perspectives from HPE students and professionals. The sample is diverse in terms of study programme, gender and age group. Primary participants were active undergraduate students from several health science majors – including medicine, dentistry, public health and pharmacy – from universities in Jakarta. To confirm the interview findings, key informants were purposively selected from among health care professionals with experience working in rural areas and academics with expertise in prosocial motivation. The initial invitation via social media yielded responses from 10 students, and recruitment continued until data saturation was achieved. Participants were asked to provide basic sociodemographic data (e.g., name, age, gender, home institution, region of origin, and schedule availability) via an online Google Forms that also included the informed consent declaration.

Data Collection

Primary data were obtained in October and November 2024 through two focus group discussions (FGD) and seven semi-structured in-depth interviews with HPE students, healthcare professionals with prior experience serving in rural areas and a social psychologist. Each FGD consisted of six to seven students. Prior to the interviews, the researchers developed semi-structured guide questions (Table 1).

Table 1: Guiding questions for FGD and in-depth interviews

Lead-in questions
Topic 1: Perceptions regarding pro-sociality
1. What comes to mind if you heard the term "prosocial"? Probing: (a) Would you give an example of prosocial-related behaviour?; (b) Would you tell us your own experiences (that related to prosocial behaviours)?
2. In your opinion, how do prosocial motives develop in people? Probing: How do you see your reason for acting prosocially as a HPE student?
3. What do you think is the importance of prosocial motives for HPE students? Probing: Could you tell us why you believe these motives are meaningful for HPE students?
Topic 2: Rural area serving experiences, motives and decision
1. What are your thoughts on health care professionals working in rural areas? Probing: (a) Would you personally be interested in serving in rural areas once you graduate? (b) What makes you want to serve in such areas? (c) Could you share your previous experience in rural areas (if there is any)?
2. What are your personal considerations to serve/not serve in rural areas? Probing: Would you explain why such consideration matter to you?
3. What factors do you think could influence HPE student prosocial motives to serve in rural areas? Probing: Would you explain how such factor influenced your prosocial motives (to serve in rural areas)?

Both FGD and in-depth interviews were conducted in Indonesian and recorded via an online Zoom meeting. The average duration was 90 minutes per FGD and 45 minutes per in-depth interview. Prior to each session, it was determined that one researcher would serve as the

facilitator and another as the transcriber. Zoom recordings were synthesised into transcripts using Prosa.ai© software, then copyedited by all researchers. Then, the original transcripts were translated into English by both researchers, who had sufficient English proficiency.

Data Analysis

Data analysis was carried out using Braun and Clarke's six steps of thematic analysis (15): (a) data familiarisation; (b) preliminary data coding; (c) identifying themes and code patterns; (d) theme review; (e) theme naming and description; and (f) analysis report. Interview records were transcribed verbatim, and relevant phrases were then coded primarily by extracting meaningful keywords and 'cleaning' any unnecessary phrases. Noteworthy sentences were phrased and labelled with abbreviations identifying the source as participant (P, referring to HPE students) or key informant (KI, referring to the health professionals and the social psychologist). The session type was also labelled as either a focus group discussion (FGD) or an in-depth interview (IDI).

To ensure trustworthiness and rigour during coding, two researchers independently conducted preliminary coding to identify relevant themes and sub-themes through pattern recognition. Subsequently, the themes were rechecked in conjunction with the other researcher to ensure relevance, precision and objectivity. Whenever uncertainties emerged during code and theme generation, internal discussions were held to reach agreement among researchers.

RESULTS

Participants' Sociodemographic

Participants in this study comprised 17 HPE students (Table 2) and five related professionals who served as key informants (Table 3). They were divided into two FGDs and seven in-depth interview sessions. The HPE students, ranging from the undergraduate level to the clerkship phase, came from six different majors (medicine, dentistry, nursing, pharmacy, public health, and nutrition science). All students' home institutions were in the Special Region of Jakarta.

Table 2. Sociodemographic of the main participants

Code	Session	Age	Gender	University	Major	Origin
P1	F1	20	Male	UA	Medicine	Denpasar
P2	F1	21	Female	UA	Public Health	Jakarta
P3	F1	23	Female	UI	Medicine	Medan
P4	F1	19	Male	UI	Medicine	Jakarta
P5	F1	19	Female	UI	Nursing	Samarinda
P6	F1	23	Female	UPDM	Dentistry	Jakarta
P7	F1	22	Female	UI	Dentistry	Jakarta
P8	F2	21	Female	UI	Public Health	Jakarta
P9	F2	20	Female	UNIKA AJ	Pharmacy	Jambi

(*continued on next page*)

Table 2. (*continued*)

Code	Session	Age	Gender	University	Major	Origin
P10	F2	18	Male	STIK SC	Nursing	Jakarta
P11	F2	21	Male	UI	Public Health	Jakarta
P12	F2	22	Male	UNIKA AJ	Medicine	Jakarta
P13	F2	20	Male	UPDM	Dentistry	Musi Rawas Utara
P14	F2	20	Male	UP	Pharmacy	Jakarta
P15	F3	20	Female	STIK SC	Nutrition	Jakarta
P16	F3	21	Male	UHAMKA	Nutrition	Jakarta
P17	F4	21	Male	UHAMKA	Dentistry	Cirebon

Table 3: Sociodemographics of the key informants

Code	Domicile	Gender	Institution	Occupation	Working experience
KI-1	Jakarta	Female	UI	Social psychologist	24 years
KI-2	Manado	Male	RSAL M	Rural medical doctor	2 years
KI-3	South Sulawesi	Female	Puskesmas L	Rural public health expert	2 years
KI-4	Central Java	Male	Puskesmas U	Rural medical doctor	2 years
KI-5	North Sumatera	Male	Puskesmas H	Rural nutritionist	4 years

Study Themes

Table 4 summarises the four themes the study identified: (a) conceptualisation of prosocial motives among HPE students and professionals regarding rural area service; (b) the significance of prosocial motives for rural health professionals; (c) hindering factors of prosocial motives in serving the rural areas; and (d) cultivating factors of prosocial motives in serving the rural areas.

Table 4: The summary of thematic analysis

Theme	Sub-theme
Theme 1: Conceptualisation of prosocial motives among HPE students and professionals regarding rural area service	Perceived definition of prosocial motive
	Types of prosocial motives
	Continuum of prosocial motives
Theme 2: The significance of prosocial motives for rural health professionals	Encouraging compassion toward patient
	Fostering resilience
	Increasing gratitude
Theme 3: Hindering factors of prosocial motives in serving the rural areas	Different personal goals
	Lack of government support
	Cultural barriers
	Limited healthcare facilities
	Physical threat
	Risking established social ties
	Lack of perceived competence

(*continued on next page*)

Table 4. (*continued*)

Theme	Sub-theme
Theme 4: Cultivating factors of prosocial motives in serving the rural areas	Sense of empathy
	Social responsibility
	Social reciprocity
	Open personality
	Spirituality
	Positive role model

Conceptualisation of prosocial motives among HPE students and professionals regarding rural area service

Perceived definition of prosocial motives

In this study, prosocial motives were defined as a sympathetic feeling that either moved individuals to support or help others. For health professionals, prosocial motives are not confined to community empowerment alone. Instead, the term refers to an intrinsic drive to provide help, comfort and simple kindness to others, even in daily life.

> For me, it's more like a sympathetic feeling toward the community … we offer whatever we can do for others. [P 9, FGD]

> Prosocial basically is a drive to benefit others … It could be started by something very small … like, trying to smile [at others] no matter how tired you are … That might be the least you can do to express willingness to help [others]. [KI 1, IDI]

Types of prosocial motives

Several types of prosocial motives emerged with respect to health professionals' intentions to serve in rural communities. Some respondents expressed an altruistic motive, stating they wanted to help the community directly. This was grounded primarily in their sense of obligation as human beings to serve others.

> Personally, I just want to [serve] … I must be able to go there [rural areas] and get involved directly to help [the community]. That's how I feel as a human being. [P 14, IDI]

One participant also expressed a self-oriented motive, focusing on an individual sense of development – to find their personal worth and satisfaction by helping others. Eventually, it could motivate them to serve in rural areas. Although they acknowledged the importance of helping others, they also expressed individual needs, such as higher income, career advancement and opportunities to gain clinical experience. This claim reflects the multicausal nature of human motives.

> I don't exactly demand recognition from others, but … thinking like, to put it simply, I can be worthwhile here … I can be a 'hero' … I could be helpful. [P 13, FGD]

> The main reason [to serve], honestly because of its high payment … But secondly, I felt this experience is valuable … they [the local community] deserved better healthcare. Yet they still struggled to fulfil their basic needs. [KI 3, IDI]

Other participants also expressed profession-related motives. These stemmed from the internalisation of health professionals' codes of values and ethics as helping professions. Such a sense of duty served as a driving force to deliver high-quality healthcare in the future, while also avoiding a sense of entitlement.

> For me, rural area service means working full-heartedly ... this is our chosen purpose as a doctor, we ... must provide proper healthcare for the community. [KI 4, IDI]

> Indeed, we already have a moral code that is like the doctor's oath, so that in the future we must help patients without looking at things... like being entitled. [P 5, FGD]

Continuum of prosocial motives

Participants perceived prosocial motives as existing along a continuum. At one end were simple daily acts of helping others; at the other extreme, prosocial motives could be oriented towards altruistic behaviours, wherein individuals prioritised others' needs over their own. In this study, participants described serving in rural areas as a clear expression of altruism.

> People with extremely high prosocial values presumably would portray a very prosocial behaviour [toward others] ... to a rather extreme spectrum, [which is] termed 'altruism'. ... Altruism is also a form of prosociality ... there is willingness to self-sacrifice for others. [KI 1, IDI]

> In my opinion, people [who] serve in rural areas, they no longer consider their own wealth ... instead, they [are willing to] sacrifice [for others]. [P 17, IDI]

Prosocial motives primarily reside within every individual. These motives may be sparked by the dynamic balance between emotional and cognitive aspects. From a psychologist's perspective, this motive stands in contrast to egoistic tendencies in that it requires empathy and self-awareness. However, Prosocial motives may develop gradually, particularly through meaningful life experiences. Even those who initially lack such motives can be shifted toward prosociality when they recognise and empathise with the actual situation of the rural community.

> Willingness to sacrifice himself, defeating himself for others' sake ... Some might say, prosocial motive contrasts with the essence of human nature, which is basically egoistic ... it [prosocial motive] requires one's self-awareness and empathy. [KI 1, IDI]

> Just recently my friends and I went to one of the rural areas ... Honestly it was quite conflicting ... seeing a lot of stunted children there ... I just realized that the discrepancies were real ... then I felt empathetic and really wanted to ... solve their problems. [P 16, IDI]

> At first, I came [to rural areas] with just curiosity ... Eventually, after I finished two years of duty, I just realized that, apparently, this [issue] is what truly happened in rural areas. ... [The community's] enthusiasm ... This brought me to rejoin the Nusantara Sehat [rural health workers] team, to serve again in such areas. [KI 4, IDI]

Internalised prosocial values serve as a driving force that motivates individuals to consistently help others. These values form an essential foundation, particularly in guiding one's prosocial actions.

> If that person [health worker] continues to serve even though there are many obstacles, that means it seems like his prosocial value is really high. [P 15, IDI]

> Values essentially serve as a reference for our behaviour. Individuals' strong prosocial values provide the foundation for their prosocial actions. [KI 1, IDI]

The significance of prosocial motives for rural health professionals

Encouraging compassion towards patients

Possessing prosocial motives foster a kind relationship with others. HPE students with prosocial motives can build effective communication with patients and deliver compassionate care.

> Especially as nurses … prosocial motive is important, [affecting] how we kindly communicate with unknown people … We want to help and serve them the best … hence, our relationship with them [patients] would also be fostered [P 10, FGD].

For me, prosocial motives are a foundation for … health professionals to act … It encourages them … to work with greater compassion. [P 8, FGD]

Fostering resilience

Prosocial motives enabled individuals to withstand challenges associated with rural health professionals' roles, despite limited resources.

> Back at that time [in rural areas], I invented an infantometer made from plywood. This [kind of thing] happened in rural areas. We got used to the limited resources situation … [Despite that], my heart is already set for serving. [KI 4, IDI]

Increasing gratitude

Exposure to limited resources and challenging conditions in rural areas cultivates a deeper sense of gratitude and acceptance. Experiencing these hardships and engaging closely with the community can foster the development of prosocial motives, ultimately promoting a more grateful attitude.

> It's been a pleasure here … I have become accustomed to limited resources here … together with the community, I learned to be … more accepting, and … especially to be more grateful. [KI 2, IDI]

Hindering factors of prosocial motives in serving the rural areas

Different personal goals

Personal life goals may contribute to health professionals' reluctance to serve in rural areas. Individuals whose passions align with academic pursuits or the desire for financial stability may feel less inclined to engage in rural service.

> Right now, from what I see, I don't really have an interest yet … because my goal is more towards academics, you know, not for clinical practice. [P 7, FGD]

> I am not interested anymore, you know, because I feel … I'm now thinking more about … getting an income that's sufficient, I mean comparable to what I've spent [for tuition]. [P 15, IDI]

Lack of government support

Lack of government support was another factor that hindered development of prosocial motives. Persistent economic and political challenges often led to feelings of helplessness and cynicism, fostering the belief that one's individual contribution would have little impact. Such perceptions could thus weaken individual prosocial motives:

> Back then, I felt like I had so much more prosociality than right now ... The reason is because I am frustrated with current policies that are not supportive toward us. I really want to help, but sometimes they [policy makers] seem to ignore us. [P 16, IDI]

> This is what makes me feel a bit ... pessimistic ... the underlying issue is actually more [toward] economic and political issues ... We can't really do much to solve issues in that direction. [P 15, IDI]

Cultural barriers

Cultural differences between regions also emerged as factors that hindered service in rural areas. These differences were often perceived as sources of uncertainty and difficulty, leading to challenges in doctor–patient communication, a sense of social rejection and, ultimately, less effective healthcare delivery. Some cultural barriers were also associated with medical-seeking behaviour and language barriers within rural communities.

> There are many cultures, you know, in rural areas, and some of them may not be open to other cultures ... so there's a concern about a cultural incompatibility ... how they accept us. [P 2, FGD]

> Because over there, the languages are different, you know, different regions. [KI 4, IDI]

Limited healthcare facilities

Limited facilities and health resources were also perceived as a factor that discouraged serving in rural areas. A lack of adequate health infrastructure and logistical resources significantly restricts health professionals' abilities to provide effective patient care.

> The consideration for going to rural areas, especially from the field of dentistry, comes down to the availability of equipment and materials. Because, if we don't have the [dental] materials, we can't do much besides just referring patients. [P 7, FGD]

> You could say the condition of that healthcare centres [Puskesmas] is absolutely concerning, they looks neglected. The building itself is already almost falling apart, and it's abandoned ... There is no internet, electricity or water there. [KI 3, IDI]

Physical threats

The risk of physical harm during service also emerged as a factor that hindered motivation to work in rural areas. Incidents such as terrorism or workplace violence were perceived to be indicators of inadequate security in certain regions.

> Perhaps more about the security. We can't deny that people in rural areas [may] not have as high a level of education as those in more developed areas. We don't know what might happen, for example we make a mistake, what if the patient's family suddenly shows up with a sharp weapon ... [that] threatened us? [P 4, FGD]

> I once heard a story from my senior, so he was like, serving at the Papua border, and he really had to be nervous like that everyday there. Whether there were terrorists or like bad people, stuff like that [threatening]. [P 5, FGD]

Risking established social ties

Established social ties, especially with close family members, also emerged as a factor that contributed to reluctance to serve in remote areas. Hesitation often stemmed from the potential disruption of an already settled life, which might lead to feelings of homesickness and the challenge of adapting to unfamiliar conditions.

> Yeah, honestly, family and friends are definitely a consideration ... There's a life that we've established here. So, for leaving, it's not like everyone can just start over. [P11, FGD]

> Maybe if I go to a remote area, it would be even farther from my parents than I am now. ... Maybe that's one of the main considerations [for me]. [P 9, FGD]

Lack of perceived competence

Even in cases where there was interest in serving in rural areas, a perceived lack of experience emerged as a hindrance. Individuals expressed a preference for first acquiring actual work experience before undertaking the responsibility of becoming rural health workers.

> As I mentioned earlier, I am interested [in serving]. However, I didn't want to immediately go to such an area, because I need to learn and gain experience here to carry it out. [P 17, IDI]

Cultivating factors of prosocial motives in serving the rural areas

Sense of empathy

A sense of empathy played a significant role in promoting prosocial motives. The feeling among HPE students that every person should be equal nurtured their desire to improve others' lives, particularly those of patients and the community. The social psychologist who participated in the study also suggested that empathy helps people recognise others' struggles, thereby strengthening their prosocial motives:

> When seeing someone with a different [poorer] condition [than us], I feel empathetic and want to change their fate so that they could be as equal [as others]. [P 8, FGD]

> Empathy is ... when we can feel what other people are experiencing ... Empathy is mandatory for an individual's willingness to help other people ... It makes us aware of other problems ... and drives us to help. [KI 1, IDI]

Social responsibility

Social responsibility – a personal obligation to address and prioritise community needs – was another factor that cultivated prosocial motives. Exposure to previous community-oriented discussions or experiences helped to develop a sense of obligation and the capacity to help the community.

> Because whether we were doctors, nurses, nutritionists, or else ... We are obliged to prioritize our patient or client. That's for sure. [P 15, IDI]

> Back [in college] ... we frequently discussed real social issues [in the community] ... With this open discussion ... we realized our capacity to help [the community]. [KI 5, IDI]

Social reciprocity

It is not only experiences of receiving help from others that generate a sense of joy; helping others is also a means of rewarding the self. This phenomenon is known as social reciprocity. This feeling can nurture prosocial motives, as helping people might be perceived as an act of returning kindness.

> When [my senior] did that [rural area service], a lot of people were grateful for his aid ... Yet I believe that he also could feel the joy [in helping people]. [P 6, FGD]

> Wondering why some people want to serve [the community], maybe one of the factors is ... he had received help [in the past], and thus he wanted to help back [others]. [P 12, FGD]

Open personality

An open personality may also serve as a factor encouraging prosocial motives. Participants described this as an adventurous tendency and desire to try new things and face challenges, particularly in the context of rural service. Such openness provides opportunities to gain new perspectives and to cultivate one's passion for helping others.

> It's more towards passion. I want to try areas like this because I've never been there before ... It can also be an experience, too. [KI 2, IDI]

> It's always been my own willingness to serve in such remote areas, because ... I am a very adventurous person. And the problem here is indeed challenging for me. [KI 5, IDI]

Spirituality

Spirituality, which is primarily referred to religiosity, may cultivate a humanistic attitude to help others without expecting something in return. In addition, a social psychology perspective emphasised that spiritual conscience could also be described by finding meaning in life – a transcendent idea that might bring a deeper sense of happiness.

> In my opinion, all religions uphold humanistic values to aid each other ... There is also one religious phrase that I always hold on to [in life]: Acts good towards others without expecting anything in return. [P 17, IDI]

> In fact, there are individuals who are more religious, [feel] like, 'I want to sacrifice everything ... and focus on serving others'. There lies happiness that they seek ... Yet this [spirituality] might refer to god's faith or even transcendent ideas ... of finding their meaning in life. [KI 1, IDI]

Positive role models

Another important factor in developing prosocial motives was the presence of positive role models. This could refer to family members, teachers or any societal figures who influenced participants' values and their inclination to help others. This role-modelling process could be triggered by insightful stories or words of encouragement:

> My teachers always said to us ... try to see the reality of our surrounding communities. He encouraged us to attend many social events, so we could be more aware and caring toward communities ... That was his message I remembered. [P 15, IDI]

> Lots of my older siblings were also doctors ... Back then, all graduate doctors had to serve in rural areas ... Hearing from their experience [in rural areas], I felt very thrilled. It makes me want to serve the rural communities. [KI 4, IDI]

DISCUSSION

Global healthcare faces challenges related to workforce distribution, particularly in remote and rural areas. Indonesia is an archipelagic country comprising more than 17,000 islands and unique geographic challenges. Data indicate that only 8.76% of medical interns are willing to serve in rural regions (16). Moreover, remote areas are often associated with high work demands, leading to physical and mental exhaustion, as well as a lack of proper infrastructure, transportation and access to essential resources, including limited medical supplies and communication barriers (17,18). Significant challenges to the distribution of the health workforce remain, despite government efforts to establish an incentive system for rural health professionals and 'Nusantara Sehat', a national health programme that deploys multidisciplinary teams of health professionals to underserved regions (18). Financial remuneration may attract healthcare workers to rural areas for a short period. However, psychological factors appear to play a large role in rural health workforce retention (17). For instance, a positive, supportive rural healthcare work environment may enhance physicians' sense of belonging and motivate them to remain in these areas for longer (19).

This study unravels the conceptual dynamics of prosocial motives for working in rural areas among HPE students in a large, diverse country. Prosocial motivation is fundamentally viewed as an intention that inspires individuals to assist others across various contexts. From a social psychology perspective, this intention is considered to be a universal human trait, although its strength varies among individuals and often manifests as altruistic behaviour. This study also suggests that working in rural areas is an act of altruism, as individuals prioritise the needs of others over their own.

In theory, prosocial motives typically comprise four forms: altruism, egoism, principledness, and collectivism (20). In this study, participants' motivation to serve rural communities stemmed primarily from either a sense of moral duty as human beings (an altruistic motive) or a desire for personal growth and fulfilment (an egoistic motive). A noteworthy finding is that a few students also expressed a principlist form of prosocial motive that was related to their self-perception and commitment to health professionals' ethics and values. Prosocial motives potentially mediate enthusiasm and emotional engagement, factors that may be linked to prosocial behaviour (21). Still, the relationship between prosociality and service in rural areas among HPE students has yet to be empirically supported.

Our participants emphasized the importance of prosocial motives for two primary reasons. First, having prosocial motives may facilitate compassionate care of communities, contributing to both personal satisfaction and improved quality of healthcare delivery. Second, prosocial motives may enhance gratitude and foster resilience; enabling them to overcome work-related challenges, cope with stressful events in rural practice and further improve their well-being (8).

The development of prosocial motivations can be understood through the Cost–Benefit Framework, derived from Social Exchange Theory. According to this perspective, individuals assess potential benefits and costs before deciding whether to assist others (22). This theoretical framework (Figure 1) may help to explain why some participants remain hesitant to serve in rural areas, despite generally expressing a positive attitude towards rural service. Barriers identified in this study include internal factors, such as personal life priorities or established social connections, and external factors, including cultural constraints, insufficient governmental support, limited health infrastructure and resources and the risk of physical harm.

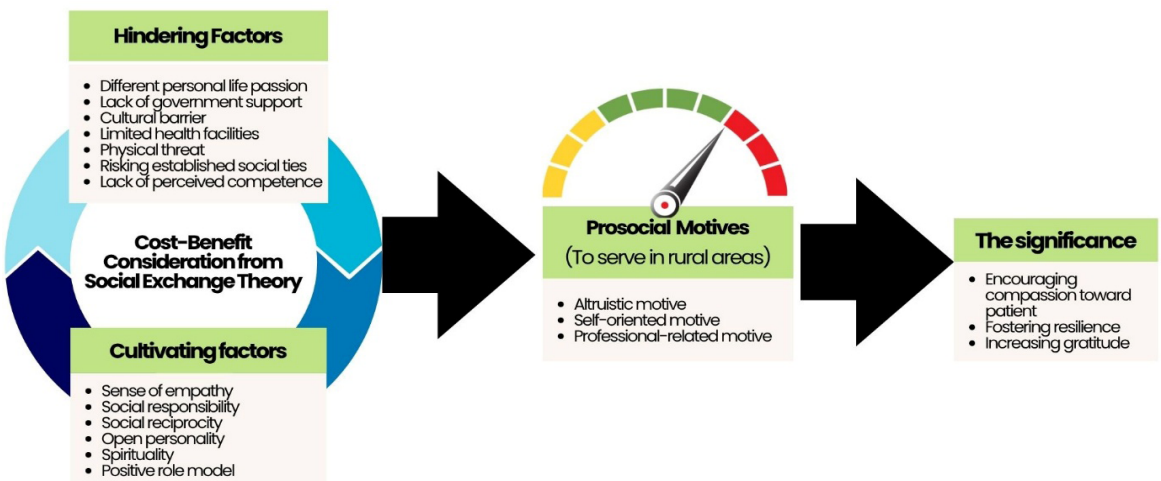

Figure 1: Proposed framework of HPE students' prosocial motives in rural community service.

Our findings suggest that the decision-making process behind choosing whether to serve in rural areas cannot be understood as a linear process. Notably, someone with strong altruistic moives may maintain a high level of motivation to work in rural settings despite awareness of existing challenges. Among the factors that cultivate prosocial motives, previous studies have consistently linked four – social reciprocity, empathy, openness to experience, and social responsibility – to prosocial behaviour (23–26). However, this study revealed two additional underexplored factors: spirituality and positive role models.

Spirituality broadly reflects an individual's sense of meaning and purpose in life, deep interpersonal connections and the influence of transcendent forces – often including religious beliefs – that guide personal decisions (27). Our participants implied that all religions ultimately share common moral principles, centred on helping others. For rural health workers, a strong spiritual conscience served as an inner resource for coping with stress and enhancing job satisfaction (28). Moreover, spirituality may foster intrinsic prosocial motives, encouraging kindness and empathy, consistent with religious teachings about 'treating others as ones wishes to be treated'. Further exploration of rural health workers' spirituality is warranted, given Indonesia's diverse religious cultural context.

Positive role models were identified as an important factor influencing HPE students' motivation to serve in rural areas. These role models included faculty, siblings, colleagues or other significant figures who inspire them to help underserved communities. This role-modelling process aligns with Social Learning Theory, which suggests that individuals learn by observing the behaviours of others and the outcomes of those behaviours (29). Wang et al. (21) hghlighted a link between positive prosocial modelling and the development of

professional identity among medical students. Correspondingly, the findings of the current study underscore the crucial role of meaningful and inspiring role models in fostering HPE students' professional identity and future engagement in rural service.

Another important finding is the continuum of prosocial motives, ranging from simple daily kindness through altruistic motives. Interestingly, where participants fell on this continuum was shaped by meaningful experience with real situations in rural areas. Interacting with people in need in the area triggers empathy, and individuals' cost–benefit assessment leads to higher prosocial motives to serve. This suggests it is important to create meaningful learning experiences for HPE students to nurture prosocial motives.

Furthermore, this study also encourage collaboration between educational institutions and government bodies. Educational institutions should focus on fostering prosocial motives among their students through specific interventions, such as personal reflection (30), mentoring-coaching (31) and narrative-based learning (32). These methods could integrate positive role models and spirituality-related content into the curricula. Improvements in government support for rural health professionals are just as necessary. Heavy workloads and insufficient support can lead to compassion fatigue and reduced quality of life (33). Support to rural health workers should extend to meaningful recognition beyond financial incentives, including career advancement and academic recommendations.

This study illustrates the dynamic nature of HPE students' prosocial motives and the factors that contribute to decisions regarding service in rural areas. Such knowledge is necessary to maintain a sustainable rural health workforce distribution programme. Nonetheless, the study has several limitations. Most of the HPE students were enrolled in relatively prestigious universities in Jakarta. Such privilege may limit generalisability, particularly in understanding students of rural origin's prosocial motives. While students from all academic years were included, clinical students may have greater opportunities for prosocial engagement with patients and communities than preclinical students - potentially shaping the development of their prosociality. Finally, this study may still be subject to social desirability bias, even though we encouraged participants to give honest responses from the start of the interviews.

CONCLUSION

This study offers a conceptual understanding of the prosocial motives that drive health professionals to work in rural areas, particularly in a large and diverse country like Indonesia. Further research should focus on multiple interventions to nurture health profession students' internal motivations through various policies and educational approaches, as this might benefit retention within rural practices. We also note that follow-up studies are warranted to further elaborate on the association between various factors and HPE students' prosocial motives.

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ETHICAL APPROVAL

Research ethics approval was previously obtained from the Research Ethics Committee, Faculty of Medicine, Universitas Indonesia, with registration number KET-1199/UN2.F1/ETIK/PPM.00.02/2024.

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