(*) Corresponding author
Original research article
DOI: 10.20544/AISC.1.1.25.P05

#UKLO Annual International Scientific Conference 2024

ASSESSMENT OF SOCIAL RESPONSIBILITY OF PHYSIOTHERAPISTS IN CREATING A HEALTH-CONSCIOUS SOCIETY - PUBLIC HEALTH APPROACH

Denis Arsovski*
University St Kliment Ohridski, Higher Medical School – Bitola
ORCID: https://orcid.org/0000-0003-4992-686X
E-mail: denis.arsovski@uklo.edu.mk

Viktorija Prodanovska – Stojchevska
University St. Kliment Ohridski Bitola, Higher Medical School Bitola
ORCID: https://orcid.org/0009-0009-3488-1727
e-mail: viktorija.stojchevska@uklo.edu.mk

Tanja Jovanovska
University St. Kliment Ohridski Bitola, Higher Medical School Bitola
ORCID: https://orcid.org/0009-0009-6316-0769
e-mail: tanja.jovanovska@uklo.edu.mk

Izabela Filov
University St. Kliment Ohridski Bitola, Higher Medical School Bitola
ORCID: https://orcid.org/0000-0003-3526-7007
e-mail: izabela.filov@uklo.edu.mk

Angelka Jankulovska
University St Kliment Ohridski, Higher Medical School – Bitola
ORCID: https://orcid.org/0000-0002-4840-0308
E-mail: angelka.jankulovska@uklo.edu.mk

Daniela Petkovska
University St Kliment Ohridski, Higher Medical School – Bitola
ORCID: https://orcid.org/0009-0002-9389-7023
E-mail: daniela.petkovska@uklo.edu.mk

Zlatko Lozanovski
University St Kliment Ohridski, Higher Medical School – Bitola
ORCID: https://orcid.org/0009-0009-9228-893X
E-mail: zlatko.lozanovski@uklo.edu.mk

Abstract

This study aimed to assess the social responsibility of physiotherapists in promoting a health-conscious society through public health initiatives and integration of health promotion strategies into clinical practice. It was used a cross-sectional survey design, with 64 physiotherapists from hospitals, private practices and educational institutions. Participants were selected using convenience sampling and data were collected via a structured electronic questionnaire that included both closed-ended and open-ended questions. The survey was focused on key areas such as the frequency of participation in community health promotion

activities, the integration of public health principles, assessing training adequacy and public health topics. Descriptive and inferential statistical methods including Chi-Square tests, ANOVA and Mann-Whitney U tests were used to analyze the data. The results indicated a significant association between holding certifications in public health and the frequency of participation in community health promotion activities, suggesting that certifications positively influence engagement in public health initiatives. The study also found that years of practice impacted participation frequency, with more experienced physiotherapists engaging more frequently in these activities. The study also revealed that many physiotherapists felt inadequately trained in public health, regardless of their education level or years of practice. In conclusion, this study focused on the need for improved public health training within physiotherapy education programs to better prepare physiotherapists for their roles in health promotion and disease prevention. By addressing these gaps and focusing on ethical and practical aspects of health promotion, physiotherapists can improve their contributions to public health and help create a more health-conscious society. Future research should explore these dynamics further, using larger and more various samples to develop a comprehensive understanding of physiotherapists' evolving roles as health promoters.

Keywords: Physiotherapy; Health promotion; Public health; Social responsibility; Education and training.

INTRODUCTION

Physiotherapists play important role in promoting health and well-being in society, extending beyond the clinical settings in which they typically work. Their expertise in physical therapy not only aids in rehabilitation and recovery but also contributes to the prevention of injuries and the promotion of healthier lifestyles (Khalid et al., 2015). As healthcare professionals, physiotherapists have a unique position that allows them to influence patients' attitudes and behaviors to health and fitness, making them key players in promoting a health-conscious society (Sousa et al., 2023). The concept of social responsibility within the healthcare profession has progressed, with focus on the importance of physiotherapists in standing up for public health. This responsibility extends beyond treating patients to include educating communities about the benefits of physical activity, proper ergonomics and preventive care. With this, physiotherapists can help reduce the incidence of chronic diseases, improve quality of life and encourage a more active approach to health (Padhan et al., 2023).

In recent years, the global health environment has faced many challenges, including the rising prevalence of non-communicable diseases and the impact of sedentary lifestyles (Park et al., 2020). In this context, the role of physiotherapists has become even more important. They are uniquely provided to direct these issues by promoting physical activity and providing guidance on maintaining healthy lifestyles. Their involvement in public health initiatives can improve community awareness about the importance of maintaining physical health, contributing to a more health-conscious society (Stead et al., 2023). The responsibility of physiotherapists extends to directing the wider determinants of health that impact well-being. These determinants include lifestyle choices, social and environmental factors and access to health education and resources (Katherine et al., 2011). Physiotherapists can promote healthier environments that support active living, pointing up the importance of creating spaces that inspire movement, exercise and physical activity for people of all ages. By engaging in community-based initiatives and collaborating with other healthcare professionals, physiotherapists can contribute to building a culture that values and prioritizes health and wellness (Corey et al., 2022).

The social responsibility of physiotherapists also involves ethical considerations, such as guaranteeing unbiased access to care and promoting inclusivity in health practices (Mármol-López et al., 2023). This means advising for marginalized groups, accenting health imbalance and working in the direction of providing care that is accessible and effective for different populations. By promoting inclusivity and equality in healthcare, physiotherapists not only improve individual health results but also contribute to social integration and the general well-being of society (Robarts et al., 2019). As the understanding of health expands to holistic and preventative approaches, physiotherapists are recognized as integral to promoting a health-conscious society (Abdul Raheem, 2023). Their role is not limited to rehabilitation but also includes education, support and leadership in public health. By focus attention on the importance of a proactive approach to health, physiotherapists can inspire persons and communities to adopt healthier lifestyles, contributing to a society that values and prioritizes health and wellness for all its members (Ferrando-Margelí et al., 2024).

METHODS

Study Design

This study is a cross-sectional survey design to assess the social responsibility of physiotherapists in promoting a health-conscious society. The survey aimed to explore the attitudes, practices and supposed responsibilities of physiotherapists regarding public health promotion and the integration of public health principles into their professional practices.

Participants

The study sample consisted of 64 physiotherapists from hospitals, private practices and educational institutions. Participants were selected using a convenience sampling method. The demographic characteristics of the respondents - gender, age, years of practice, education level and certifications in public health were collected to ensure a various representation of the physiotherapy profession.

Data Collection

Data was collected with a structured questionnaire that was distributed electronically to the participants. The questionnaire included both closed-ended and open-ended questions to capture quantitative and qualitative data. Key areas covered in the questionnaire included:

- Gender, age, years of practice, education level, and certifications in public health.
- Questions assessing how often participants are part of activities such as workshops, seminars and fitness programs.
- Questions examining how frequently physiotherapists included public health principles into their daily practices.
- Participants also were asked to rate their adequacy of training in public health.
- Questions identifying the public health topics most frequently used in practice or community activities.
- Information on the primary work setting of the participants was collected to analyze its impact on public health engagement.

Statistical Analysis

Data was analyzed using a combination of descriptive and inferential statistical methods to identify patterns and relationships among variables. Summary statistics such as frequencies, percentages, means and standard deviations were calculated to describe the demographic characteristics of the sample and responses to the survey questions. This provided general overview of the sample distribution and characteristics. Chi-Square Test of Independence was

used to assess the association between categorical variables. For example, it was used to analyze the relationship between holding certifications in public health and the frequency of participation in community health promotion activities, as well as between work settings and participation in these activities. The chi-square test helped identify important associations, which were reported with chi-square statistics and p-values.
ANOVA test was used to compare the means of continuous variables across multiple groups. In this study, it was used to determine if there were significant differences in the supposed importance of community outreach based on the highest level of education of the participants. The F-statistic and p-value from the ANOVA test were used to determine statistical significance. Mann-Whitney U Test was used to compare differences between two independent groups when the dependent variable was not normally distributed. It was applied to compare the frequency of participation in community health promotion activities between groups based on years of practice and holding certifications. The Mann-Whitney U statistic and p-value provided information about important differences between the groups. Spearman's correlation was used to assess the relationship between two ordinal variables. In this study, it was used to analyze the correlation between education level and supposed training adequacy in public health. The Spearman correlation coefficient and associated p-value were calculated to evaluate the strength and significance of the correlation.
Data were analyzed using both descriptive and inferential statistics to identify significant patterns and relationships. Data cleaning procedures ensured accuracy, with missing values addressed through appropriate imputation techniques. Normality and homogeneity of variance assumptions were checked using the Shapiro-Wilk test and Levene's test. When assumptions were violated, non-parametric tests such as the Mann-Whitney U Test were applied. Effect sizes were calculated for all significant results to assess the magnitude of observed differences, and Bonferroni corrections were applied to adjust for multiple comparisons. All analyses were conducted using Python. Results were considered statistically significant at $p < 0.05$, with practical significance also evaluated through effect size metrics.

Ethical Considerations
The study cohered to ethical guidelines for research involving human participants. Informed consent was obtained from all participants prior to data collection, ensuring that they were fully aware of the study's purpose and their right to withdraw at any time. Confidentiality and anonymity were maintained throughout the study to protect participants' privacy.

Limitations and Future Research
While this study provides valuable information into the social responsibility of physiotherapists in promoting a health-conscious society, several limitations should be addressed. The study's sample size was relatively small and participants were recruited through convenience sampling. As a result, the findings may not be generalizable to all physiotherapists. Future research should aim to include larger, various samples to improve the generalizability of the results. The cross-sectional design of this study limits the ability to draw causal inferences. Longitudinal studies are needed to explore the long-term impact of education, certifications, and experience on physiotherapists' public health practices. The use of self-reported data may introduce response bias, as participants might overestimate or underestimate their involvement in public health activities. Future studies could incorporate objective measures of participation and practice to provide a more accurate assessment.

RESULTS

Table 1: Gender Statistics Table.

Gender	Count	Percentage (%)	Mean	Standard Deviation
Female	36	56.25	0.5625	0.5
Male	28	43.75	0.5625	0.5

Table 1 provides information about the gender of the participants. Out of a total of 64 participants, 36 are female (56.25%), and 28 are male (43.75%). The mean value for gender is 0.5625, which reflects the proportion of female respondents when encoded numerically (Female = 1, Male = 0). The standard deviation of 0.5 indicates a balanced distribution of gender among the participants, with females slightly outnumbering males in this research. These results suggest that both genders are well represented, providing a balanced perspective in the subsequent analysis of public health attitudes and practices among physiotherapists.

Table 2: Age Among Participants.

Age Group	Count	Percentage (%)	Mean	Standard Deviation
20-30 years	24	37.50	2.125	1.076
31-40 years	17	26.56	2.125	1.076
41-50 years	14	21.88	2.125	1.076
51-60 years	9	14.06	2.125	1.076

Table 2 presents information of the age distribution among the participants. Out of the 64 participants, the largest group is 20-30 years, consisting 37.50% (24 participants) of the sample. The next largest group is 31-40 years, making up 26.56% (17 participants). Participants within the 41-50 years constitute 21.88% (14 participants), while the smallest group, 51-60 years, accounts for 14.06% (9 participants).The mean aegis 2.125, suggesting that the sample is slightly focused towards the younger age groups. The standard deviation of 1.076 indicates a moderate spread in age distribution, showing that the participants come from a various range of age groups.

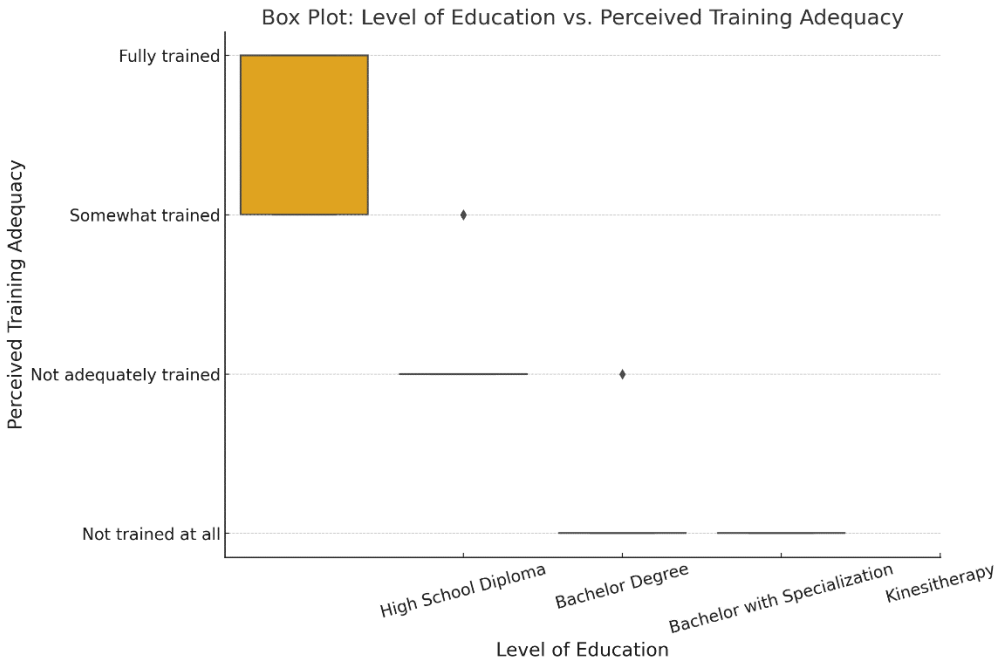

Figure 1: Spearman Rank Correlation - Level of Education vs. Perceived Training Adequacy.

Figure 1 illustrates the relationship between the education levels of participants and their supposed adequacy of training in public health. Participants with only a high school diploma tend to perceive themselves as "Somewhat trained" in public health. There is a wide range of responses within this group, suggesting variability in how adequately trained they feel. The majority of participants with a bachelor's degree report feeling "Not adequately trained." This indicates a gap in public health training among those with a basic higher education level. Specialists in rehabilitation predominantly feels "Not adequately trained," with a narrow spread of responses. Respondents with a specialization in kinesitherapy consistently report being "Not trained at all." This draws a significant perceived inadequacy in public health training within this specialized group.
By analyzing this data through a box plot, we have found that perceived training adequacy in public health does not necessarily increase with higher levels of education among physiotherapists. In fact, those with specialized education, such as in kinesitherapy report the lowest perceived training adequacy. These findings suggest that public health training may need to be strengthened across all levels of physiotherapy education, particularly in specialized programs. This could improve the general preparedness of physiotherapists to fulfill their public health responsibilities.

Table 3: Chi-Square Test - Work Setting vs. Participation in Community Health Promotion Activities.

Work Setting	**Observed Frequently**	**Observed Occasionally**	**Observed Rarely**	**Observed Never**	**Expected Frequently**	**Expected Occasionally**	**Expected Rarely**	**Expected Never**
Hospital	0	0	0	3	0.14	0.47	1.36	1.03
Private practice	3	16	0	0	0.89	2.97	8.61	6.53
Educational institution	0	13	22	7	1.97	6.56	19.03	14.44

Table 3 presents the observed and expected frequencies for the participation in community health promotion activities across different work settings. Observed values are the actual counts of how frequently respondents in different work settings (hospital, private practice, educational institution) reported participating in community health promotion activities (Frequently, Occasionally, Rarely, Never).Expected values are the frequencies that would be expected if there were no association between work setting and participation in community health promotion activities, calculated based on the overall distribution of responses.
The Chi-Square test was conducted to determine if there is a statistically significant association between the work setting of physiotherapists and their participation in community health promotion activities. The Chi-Square statistic is 44.91, and the p-value is 4.87e-08. Since the p-value is much smaller than the standard significance level of 0.05, we can conclude that there is a statistically significant association between work setting and participation in community health promotion activities. This result suggests that the frequency of participation in community health promotion activities varies significantly across different work settings. For instance, it is evident that respondents working in educational institutions participate more frequently in such activities compared to those in hospitals or private practice. This analysis gives information about the importance of considering the work environment when evaluating the engagement of physiotherapists in public health initiatives.

Table 4: ANOVA: Importance of Community Outreach vs. Highest Level of Education.

Source	Sum of Squares	Degrees of Freedom	Mean Square	F-Statistic	P-Value
Between Groups	5175.67	3	86.26	86.26	0.0
Within Groups	86.26	60	1.44		

Table 4 summarizes the results of an ANOVA test conducted to determine if there are significant differences in the perceived importance of community outreach based on the highest level of education of the respondents. The source indicates the sources of variation. "Between Groups" refers to the variability due to differences between the education levels. "Within Groups" refers to the variability within each education level group. The "Between Groups" sum of squares (5175.67) measures the variability due to differences between education levels. The "Within Groups" sum of squares (86.26) measures the variability within each education level. The number of independent values or quantities that can vary. For "Between Groups," it's 3 (the number of education levels minus one). For "Within Groups," it's 60 (total respondents minus the number of groups).
The ANOVA results indicate a statistically significant difference in how participants with different education levels see the importance of community outreach. This suggests that education level has important impact on the value placed on community outreach activities, with the variations likely reflecting differing levels of exposure to or emphasis on public health responsibilities in their educational experiences.

Table 5: Impact of Certifications on Frequency of Participation in Community Health Promotion Activities: Chi-Square Test Results.

Certifications in Public Health	Frequently	Never	Occasionally	Rarely
No	0 (0.0%)	10 (21.28%)	15 (31.91%)	22 (46.81%)
Yes	3 (17.65%)	0 (0.0%)	14 (82.35%)	0 (0.0%)
Chi-Square Statistic	26.88			
p-value	0.000006			
Degrees of Freedom	3			

Based on table 5, Chi-Square Test was used to determine if there is a statistically significant association between holding certifications in public health and the frequency of participation in community health promotion activities (such as workshops, seminars, fitness programs). The results show a statistically significant relationship between holding certifications in public health and the frequency of participation in community health promotion activities. This suggests that physiotherapists who hold certifications or specializations in public health are more likely to frequently participate in community health promotion activities compared to those without such certifications. This analysis indicates that certifications may positively influence the likelihood of physiotherapists engaging more actively in public health initiatives, reflecting the potential impact of professional development on public health practice.

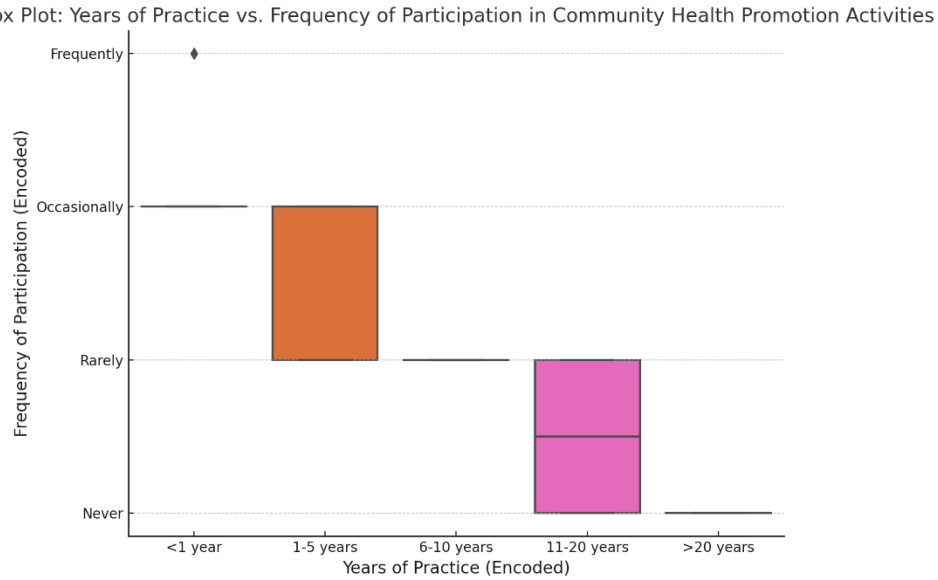

Figure 2: Mann-Whitney U Test Results - Years of Practice vs. Frequency of Participation in Community Health Promotion Activities.

Mann-Whitney U Test was performed to evaluate whether there is a statistically significant difference in the frequency of participation in community health promotion activities between physiotherapists with different years of practice experience. The test statistic of 634.5 reflects the rank-based differences between the two groups: less experienced (0-2 years of practice) and more experienced (3-4 years of practice). The extremely low p-value of 5.48e-08 suggests that there is a statistically significant difference between the groups, meaning the difference in participation frequency between less and more experienced physiotherapists is unlikely to be because of random chance.

The box plot provides a visual representation of the distribution of the frequency of participation in community health promotion activities across different experience levels. The results of the Mann-Whitney U Test, along with the box plot visualization indicate that the years of practice in a great matter impact the frequency of participation in community health promotion activities. Physiotherapists with more experience are more likely to engage frequently in such activities, suggesting that increased practice years may correlate with greater involvement in community health initiatives.

DISCUSSION

This study aimed to explore the social responsibility of physiotherapists in promoting a health-conscious society, focusing on their engagement in public health promotion activities, integration of public health principles into daily practice and the impact of various factors such as education level, certifications and years of practice. The findings provide information into the current practices and perceptions of physiotherapists regarding their role in public health.

Key Findings

This study revealed significant association between holding certifications in public health and the frequency of participation in community health promotion activities. Physiotherapists with certifications were more likely to participate frequently in such activities compared to their non-certified equivalents. This finding suggests that certifications may improve physiotherapists engagement in public health initiatives, potentially by

increasing their confidence, knowledge and recognized competence in these areas. The analysis also showed mixed results regarding the role of education level in public health practices. While higher education levels were not consistently associated with increased participation in public health activities, participants with specialized training or higher degrees often reported feeling less adequately trained in public health principles. This paradox may reflect a gap in current physiotherapy education programs, where advanced academic training does not necessarily equate to improved public health competency. It suggests a need for more connected public health training within physiotherapy curricula to better prepare graduates for their roles in health promotion and disease prevention.

The study also found that years of practice influenced the frequency of participation in community health promotion activities. More experienced physiotherapists were more likely to engage frequently in these activities, possibly due to their accumulated experience, professional networks, and increased confidence in addressing public health issues. However, newer physiotherapists showed varying levels of participation, indicating that early-career professionals might benefit from additional support and mentorship to foster their involvement in public health roles. Many participants reported feeling inadequately trained in public health, regardless of their education level or years of practice. This general perception draw attention to the need for improved training and professional development opportunities that focus specifically on public health competencies. Improving physiotherapists' skills in this area is crucial for enabling them to effectively contribute to community health promotion and fulfill their social responsibilities.

Implications for Practice

Physiotherapy education programs should incorporate comprehensive public health training to equip future practitioners with the necessary skills and knowledge to engage in health promotion activities. This could include modules on public health principles, community outreach and interprofessional collaboration. Professional bodies and organizations should inspire physiotherapists to get certifications in public health and provide accessible, relevant continuing education opportunities. Such initiatives could improve practitioners' confidence and competence in addressing public health challenges.

Connection to Prior Studies

The study by Alodaibi et al. (2022) explored the role of physical therapists in promoting health and wellness among patients with musculoskeletal disorders in Saudi Arabia. The findings revealed that while physical therapists were aware of the importance of addressing lifestyle risk factors related to health and wellness, their knowledge and experience in promoting broader lifestyle changes (such as smoking cessation, nutrition, sleep, and stress management) were limited. The study gives information about the need for further education and training to improve physical therapists' competencies in health promotion. In comparison, our study also found that physiotherapists recognize the importance of public health promotion but feel inadequately trained in several key areas, including public health principles and community health promotion activities.

One perspective paper on the therapeutic relationship and social support in physiotherapy focuses on the critical role in shaping patient results. The authors draw attention to the importance of both using social support and keeping a strong therapeutic relationship to improve person-centered care and rehabilitation outcomes. The paper suggests practical strategies for physiotherapists, such as promoting social support networks, facilitating social skill development and using a strong therapeutic relationship through effective communication, patient-centered care, and reflective practice (Moecke et al., 2024).In

comparison, our study also accents the importance of the physiotherapist's role in promoting public health and integrating wider health principles into clinical practice.

The study by Delany et al. (2015) discusses the ethical considerations involved in integrating health promotion into physiotherapy practice. As physiotherapists are increasingly encouraged to address population-level health problems, the authors focus on the potential ethical challenges, such as the risk of generalized health promotion strategies that may not cope with an individual patient's circumstances, values or capacity to change. This research paper accents the need for physiotherapists to apply ethical reasoning, including principles of beneficence, non-maleficence, autonomy and justice, to ensure that health promotion efforts improve patient well-being without causing harm or infringing on individual autonomy. Our study aligns with Delany et al.'s emphasis on the importance of ethical considerations in physiotherapy practice, particularly in the context of health promotion.

The study by Alsalem & Almuhaid (2023) explores the role of physiotherapists as health promotion practitioners within primary health care settings in Riyadh City. Through a survey of 362 physiotherapists, the study used factor analysis, principal components analysis, regression analysis and correlation analysis to clarify and point the contributions of physiotherapists to health promotion within the PHC sector. The findings give information about the importance of physiotherapists in developing effective health policies and improving their role in public health.In comparison to our research, which also examines the role of physiotherapists in public health promotion, both studies focus on the expanding scope of physiotherapy beyond traditional roles.

CONCLUSION

This study gives information about the significant role physiotherapists play in promoting a health-conscious society through public health initiatives and the integration of health promotion strategies into their clinical practice. The findings demonstrate that physiotherapists recognize the importance of health promotion but often feel inadequately trained in key areas such as public health principles and community health promotion activities. Certifications in public health were shown to positively influence physiotherapists' engagement in health promotion activities, suggesting the value of professional development and specialized training. The study also identified variations in engagement based on work settings, years of practice, and education levels, pointing to the need for selected training programs and supportive policies that promote a more active role for physiotherapists in public health.

By giving the gaps in training and focusing on the ethical and practical aspects of health promotion, physiotherapists can improve their contributions to public health and help create a more health-conscious society. Future research should aim to explore these dynamics further, with larger and more various samples, to develop a comprehensive understanding of how physiotherapists can best be supported in their evolving roles as health promoters.

REFERENCES

1. Khalid, M.T., Sarwar, M.F., Sarwar, M.H., & Sarwar, M.H. (2015). Current Role of Physiotherapy in Response to Changing Healthcare Needs of the Society.
2. Sousa, M. F., & Moor, F. (2023). Physiotherapists' Perceptions of the Influence of Their Health Behaviours on Their Advice to Patients. Cureus, 15(2), e35396. https://doi.org/10.7759/cureus.35396

3. Padhan, S., & Mohapatra, A. (2023). Empowering wellness: Unveiling the key role of physiotherapy in preventive and promotive health. Indian Journal of Preventive Medicine, 11, 71–77.
4. Park, J. H., Moon, J. H., Kim, H. J., Kong, M. H., & Oh, Y. H. (2020). Sedentary lifestyle: Overview of updated evidence of potential health risks. Korean Journal of Family Medicine, 41(6), 365–373. https://doi.org/10.4082/kjfm.20.0165
5. Stead, A., Vishnubala, D., Marino, K. R., Iqbal, A., Pringle, A., &Nykjaer, C. (2023). UK physiotherapists delivering physical activity advice: what are the challenges and possible solutions? A qualitative study. BMJ open, 13(4), e069372. https://doi.org/10.1136/bmjopen-2022-069372
6. Sullivan, K. J., Wallace, J. G., O'Neil, M. E., Musolino, G. M., Mandich, M., Studer, M. T., Bottomley, J. M., Cormack, J. C., Nicholson, S. K., & Jensen, G. M. (2011). A vision for society: Physical therapy as partners in the national health agenda. Physical Therapy, 91(11), 1664–1672. https://doi.org/10.2522/ptj.20100347
7. Corey, J. J., Shirazipour, C. H., Fricke, M., & Evans, B. (2022). Physiotherapists' role in physical activity promotion: Qualitative reflections of patients and providers. Physiotherapy Theory and Practice, 39(4), 814–826. https://doi.org/10.1080/09593985.2022.2031361
8. Mármol-López, M. I., Marques-Sule, E., Naamanka, K., Arnal-Gómez, A., Cortés-Amador, S., Durante, & Tejada-Garrido, C. I., Navas-Echazarreta, N., Juárez-Vela, R., & Gea, V. (2023). Physiotherapists' ethical behavior in professional practice: A qualitative study. Frontiers in Medicine, 10, 1158434. https://doi.org/10.3389/fmed.2023.1158434
9. Robards, F., Kang, M., Steinbeck, K., & others. (2019). Health care equity and access for marginalised young people: A longitudinal qualitative study exploring health system navigation in Australia. International Journal for Equity in Health, 18, 41. https://doi.org/10.1186/s12939-019-0941-2
10. AbdulRaheem Y. (2023). Unveiling the Significance and Challenges of Integrating Prevention Levels in Healthcare Practice. Journal of primary care & community health, 14, 21501319231186500. https://doi.org/10.1177/21501319231186500
11. Ferrando-Margelí, M., Suárez-Serrano, C., Garay-Sanchez, A., &Marcén-Román, Y. (2024). Leadership and physiotherapy: A scoping review. Heliyon, 10(11), e32054. https://doi.org/10.1016/j.heliyon.2024.e32054
12. Alodaibi, F. A., Alotaibi, M. A., Almohiza, M. A., &Alhowimel, A. S. (2022). Physical Therapists' Role in Health and Wellness Promotion for People with Musculoskeletal Disorders: A Cross-Sectional Description Study Conducted in Saudi Arabia. Journal of multidisciplinary healthcare, 15, 567–576. https://doi.org/10.2147/JMDH.S356932
13. Moecke, D. P., & Camp, P. G. (2024). Social support from the physiotherapist and the therapeutic relationship in physiotherapy: Bridging theory to practice. Physiotherapy Theory and Practice, 1–11. https://doi.org/10.1080/09593985.2024.2372687
14. Delany, C., Fryer, C., & van Kessel, G. (2015). An ethical approach to health promotion in physiotherapy practice. Health Promotion Journal of Australia, 26, 255–262. https://doi.org/10.1071/HE15052
15. \Alsalem, T. N. S., &Almuhaid, T. M. J. (2023). Physiotherapist as health promotion practitioners in primary health care (PHC) in Riyadh City. Advances in Clinical Medical Research, 3(4), 1–45. https://doi.org/10.52793/ACMR.2023.4(1)-49