

# Utilisation of standardised outcomes measures by clinical Physiotherapists working in Namibia: a nationwide cross-sectional study

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## Abstract

### Introduction

The utilisation of standardised outcome measures (SOMs) is crucial for evaluating patients' health status. Physiotherapists are highly recommended to use SOMs routinely. Despite the well-documented benefits of using SOMs, the utilisation of SOMs in clinical practice is still problematic particularly in Africa. In Namibia, there is dearth of information about SOMs utilisation by physiotherapists and the associated factors. This study was aimed at determining the extent of routine utilisation of SOMs and the associated demographic and work-related factors among physiotherapists.

### Methods

A cross-sectional, nationwide, online survey was conducted and all registered qualified physiotherapists and intern physiotherapists working in public or private hospitals/clinics were invited to participate. Data was analysed using Statistical Package for the Social Sciences (SPSS) version 29.0. The Chi-square ( $\chi^2$ ) and Fishers exact test investigated the relationship between the associated factors and routine SOMs utilisation. The alpha level was set at 0.05.

### Results

Of 230 participants who received the invitational link, 99 (43.0%) responded timeously to the call to participate. Although 97.9% (n=94) of the participants indicated having used at least one type of SOMs in the last six months, the frequency of utilisation varied. Routine utilisation, defined as 70%-100% of the time, was reported in only 49.0% of the participants. The Chi-square test only showed significant findings for gender ( $p=0.01$ ) and clinical specialty ( $p=0.004$ ). The odds of utilising SOMs were 4.13 greater among physiotherapists with a clinical specialty and 3.88 times greater for females than males.

### Conclusion

The rates for routine utilisation of SOMs by Namibian physiotherapists are unfavourable. Female gender and clinical specialty influenced the utilisation of SOMs in daily clinical practice. Cognisant of the study limitations, these results call for the need to improve the routine utilisation of the SOMs in Namibia.

**Keywords:** Physiotherapy, Physiotherapists, Namibia, Standardised Outcome Measures, Cross-sectional Study

## Introduction

In various clinical or hospital settings, physiotherapists (PTs) play an integral role in improving patients' functional status and health-related quality of life (HRQoL)<sup>1,2</sup>. To evaluate these key health outcomes, PTs utilise appropriate standardised outcome measures (SOMs) to document baseline clinical presentation and progression<sup>1-3</sup>. Literature defines outcome measures as reliable and valid tools for evaluating key health outcomes following interventions instituted for patient care<sup>2,4,5</sup>. With the amplified emphasis on evidence-based practice globally<sup>1,2</sup>, the use of SOMs is strongly advocated in physiotherapy by professional societies, teaching institutions, and regulatory bodies<sup>6,7</sup>.

Literature reports poor to moderate utilisation of SOMs by clinical PTs with the extent of utilisation different between countries and clinical settings<sup>8-13</sup>. In Africa, a descriptive cross-sectional survey involving 105 registered PTs in Ghana

reported a 47.6% utilisation frequency<sup>10</sup>. Perceived barriers to utilisation cited in the study included SOMs unavailability in the health facility, time, and workload<sup>10</sup>. In Egypt, a cross-sectional study involving 74 PTs reported routine utilisation of SOMs in 43.2%<sup>11</sup>. This was despite 90% of respondents highlighting positive benefits. Furthermore, there is evidence showing no statistically significant changes in the utilisation rates assessed longitudinally among African PTs. For instance, a study conducted in Nigeria compared SOMs utilisation rates between year 2006 and year 2016 using a similar questionnaire<sup>8</sup>. They found that 77% -97% PTs reported not utilising SOMs in 2006 whilst a comparable proportion (63.4%-97.3%) failed to use the expected SOMs in the year 2016<sup>8</sup>.

Possible differences in PTs population size, country-specific regulatory practices and registration requirements for PTs among other factors may preclude direct extrapolation of results from studies conducted elsewhere.

This justifies the need for continued studies investigating SOMs utilisation in countries such as Namibia where physiotherapy is still in its infancy with regards to development. In Namibia, there is no study that has investigated and documented the routine utilisation of SOMs by clinical PTs and interns working in public and private sector. Therefore, this study aimed at determining the proportion of clinical PTs and interns routinely using SOMs and the associated demographic or work-related factors.

## Methods

### *Study design, research settings and participants*

This study was reported based on the STROBE checklist<sup>14</sup> (Additional File 1). The study was conducted as a cross-sectional study, targeting all qualified PTs and intern PTs working in public or private hospitals/clinics in Namibia. The country has 14 national regions with the capital city located in the Khomas region. In Namibia, the Health Professional Council of Namibia (HPCNA) mandates every newly qualified PT to register with Allied Health Professional Council of Namibia (AHPANA) as an intern PT for 12 months. Full registration is granted after passing AHPANA examinations. At the time of the study, there were 253 qualified PTs and interns. The University of Namibia is the only university training student PTs on a four-year degree program since 2018.

### *Sample size considerations*

Sample size was calculated using the EpiInfo StatCalc based on 253 qualified PTs and interns in Namibia. The estimated a sample size ranged 69-99 PTs based on expected frequency of SOMs utilisation of 47.6% reported among Ghanaian PTs with a non-response rate of 30%<sup>10</sup> calculated at 95% confidence interval (CI). The margin of error was set at 10% with design effect of 1.

### *Eligibility criteria and recruitment methods*

All qualified PTs and interns on AHPANA list were invited to participate. However, participants had to be in practice six months prior to the study. This time period is commonly reported in literature<sup>10</sup> and ensured adequate exposure to clinical practice for SOM utilisation. Participants had to be working in public or private sector regardless of age, gender, nationality, and clinical specialty. Interns were recruited notwithstanding their training institution and had to report at least six months clinical experience.

### *Questionnaire*

The research instrument was amalgamated from questions adopted from previous studies<sup>4,10,15</sup>. The final questionnaire had 40 questions structured in two sections. Section A elicited participant and work-related information such as gender, age, highest qualification, present job, training institution, current work facility, clinical specialty, years of clinical experience, age of patients seen, number of treatment sessions per day, clinical hours worked per week, and internet access at work. Section B had questions enquiring about the extent of utilisation of SOMs, types of SOMs commonly used, perceived facilitators and barriers. This paper only reports data on the extent of utilisation of the SOMs and the associated demographic and work-related factors elicited from Question 1 to Question 25 of the questionnaire. The screening question for "routine" utilisation of SOMs in the last six months was phrased as: "Did you use SOMs during patient evaluation/assessment or re-evaluation?" with the

following responses (i) Yes, every time (100% of the time); (ii) Yes, usually (about 90% of the time); (iii) Yes, frequently (about 70% of the time); (iv) Yes, occasionally (about 30% of the time) (v) Rarely (less than 10% of the time). Based on suggestions proffered by the content validation experts, the operational definition of "routine utilisation" implied identifying participants using SOMs frequently (>70%), usually (>90%) and every time (100%).

The English questionnaire was subjected to content validation using regional and international experts. Eight (8) experts, invited based on research experience, evaluated the relevance of each question using a 4-point scale (1=not relevant, 2=somewhat relevant, 3=quite relevant, 4= highly relevant)<sup>16</sup>. For each question, the content validity index (CVI) was calculated as the number of experts rating a question as either 3 or 4, divided by 8 (total number of experts). Questions with CVI of  $\geq 0.70$  had to be maintained<sup>16,17</sup>. All the questions were rated quite to highly relevant to the specified study objectives and required no further modifications with an average CVI for all the questionnaire items calculated at 0.97.

Thereafter, the instrument was assessed for reliability using the test-retest study design with assessments separated by seven (7) days. The methodological approach was adopted from previous studies<sup>17</sup>. To minimise contamination bias and depletion of the target population, University of Namibia (UNAM) clinical physiotherapy students were invited to participate. Accounting for agreement occurring purely by chance, the test-retest reliability results were evaluated for perfect agreement using Cohen's weighted kappa (Kw) statistic since most questions had more than two possible ordinal responses<sup>17,18</sup>. The Kw scores were interpreted using the criteria outlined by Landis and Koch<sup>19</sup> and the questions achieved above substantial agreement Kw scores ranging from 0.61 to 0.89.

### *Data collection procedure*

Ethical clearance was obtained from UNAM (Ref #:SAH04/23). A list of all the qualified PTs registered in Namibia and their contact details was obtained from AHPANA. An electronic-based data collection tool (Google Forms) was emailed to all potential participants. Additionally, the study was shared with Namibian Society of Physiotherapy (NSP) members. Researchers also shared the link on social media platforms such as WhatsApp for snowballing sampling. Reminder emails were periodically sent to all participants for the entire study duration. Each participant received the information letter explaining the study and had to indicate willingness to participate. Data was collected from June to August, 2023 until no more responses were received.

### *Data analysis*

Statistical Package for the Social Sciences (SPSS) version 29.0 was used for analysis. Returned questionnaires with missing data were rejected. Descriptive statistics were computed for categorical data. Independent factors were dichotomised into binary variables, except for clinical working hours per week. The Chi-square ( $\chi^2$ ) test investigated the association between participant or work-related characteristics with routine utilisation of SOMs. Fishers' exact test was reported when appropriate. Significance level was set at  $p < 0.05$ . Binary logistic regression model estimated the odds ratios with 95% CI.

**Table 1: Demographic and work-related information of the participants (N=96)**

Variable	Response	n (%)
Age category (years)	20-29	45(46.9)
	30-39	41(42.7)
	40-49	10(10.4)
Gender	Males	32(33.3)
	Females	64(66.7)
Present job	Physiotherapist	68(70.8)
	Interns	28 (29.2)
Educational qualification	Bachelors	86(89.6)
	Masters	10(10.4)
Undergraduate studies <sup>§</sup>	Outside Namibia	82(85.4)
	Namibia	14(14.6)
Continuing professional education <sup>‡</sup>	Yes	68(70.8)
	No	28(29.2)
Area of specialisation	None	49(51.0)
	Other*	47(49.0)
Clinical experience (years)	0-5 years	49(51.0)
	>5 years	47(49.0)
Location of work facility	Private	74(77.1)
	Government	22(22.9)
Region	Khomas	65(67.7)
	Other**	31(32.3)
Age of patients predominantly seen (years)	Adults (≥18)	65(67.7)
	Children (<18)	1(1.00)
	Both	30(31.3)
Clinical hours of work per week	1-29 hours	33(34.4)
	30-39 hours	38(39.6)
	40+ hours	25(26.0)
Number of physiotherapeutic treatment sessions completed in 1day <sup>†</sup>	<10 sessions	67(69.8)
	10+ sessions	29(30.2)

\* refers to cardio-pulmonary physiotherapy, general neurology, general paediatrics, musculoskeletal, neuro-musculoskeletal; \*\* refers to other regions in Namibia such as Zambezi, Erongo, Karas, Kavango East, Kavango West, Ohangwena, Omaheke, Oshana, Oshikoto, Otjozondjupa, Kunene, Hardap, Omusati, † refers to the any certificate awarded after attending a continuing professional educational courses; §refers to whether the respondents studied in Namibia or outside for their

undergraduate physiotherapy studies; ‡refers to the number of patients treated in one day at work dichotomised into <10 and 10+ sessions. Area of specialisation was based on their perceived opinion looking collectively at their professional educational training, years of clinical experience, group of patients commonly treated in daily clinical practice and the continued professional education certificates awarded to them.

**Table 2: Factors associated with routine utilisation of the SOMs**

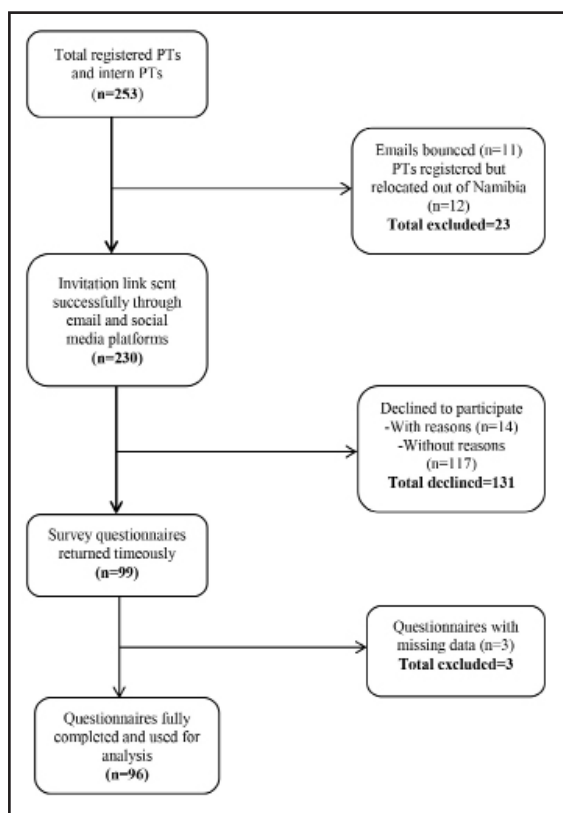
Variable	Utilisation of SOMs		Pearson Chi-square X <sup>2</sup> (df) p value
	Yes n (%)	No n (%)	
Gender			
Male	10 (31.3)	22 (68.8)	6.02(df=1) 0.01
Female	37 (57.8)	27 (42.2)	
Age category (years)			
<30	22 (48.9)	23 (51.1)	0.00(df=1) 0.99
30+	25 (49.0)	26 (51.0)	
Present job			
Physiotherapist	34 (50.0)	34 (50.0)	0.10(df=1) 0.75
Intern	13 (46.4)	15 (53.6)	
Educational qualification			
Bachelors	40(46.5)	46(53.5)	0.19*
Masters	7(70.0)	3(30.0)	
Undergraduate studies			
Namibia	9(64.3)	5(35.7)	1.54(df=1) 0.21
Outside Namibia	38(46.3)	44(53.7)	
Continuing education certificate			
Yes	36(52.9)	32(47.1)	1.48(df=1) 0.22
No	11(39.3)	17(60.7)	
Area of specialisation			
None	16(34.0)	31(66.0)	8.20(df=1) 0.004
Specialised	31(63.3)	18(36.7)	
Years of clinical experience			
0-5years	24(49.0)	25(51.0)	0.00(df=1) 1.00
>5 years	23(49.0)	24(51.0)	
Location of work facility			
Private	36(48.6)	38(51.3)	0.01(df=1) 0.91
Government	11(50.0)	11(50.0)	
Region			
Khomas	35(53.8)	30(46.2)	1.92(df=1) 0.17

**Table 2 Cont...**

Other	12(38.7)	19(61.3)	
Age of patients seen (years)			
Adults (≥18)	31(47.7)	34(52.3)	1.10(df=2) 0.58
Adults and Children	15(50.0)	15(50.0)	
Children (<18)	1(100)	0(0.00)	
Clinical hours of work/week			
1-29 hours	18(54.6)	15(45.5)	2.28(df=2) 0.32
30-39 hours	15(39.5)	23(60.5)	
40+	14(56.0)	11(44.0)	
Treatment sessions in 1day			
<10	33(49.3)	34(50.7)	0.01(df=1) 0.93
10+	14(48.3)	15(51.7)	
Internet access at work			
Yes	32(50.8)	31(49.2)	0.25(df=1) 0.62
No	15(45.5)	18(54.5)	

\*Fishers exact test reported for educational qualification; df= degrees of freedom; SOM

s=standardised outcome measures



**Figure 1: Flow chart showing survey link distribution**

**Results**

**Sample characteristics**

Out of the 230 participants who received the invitational link, 99 responded timely to the call to participate giving the study response rate of 43.0% (Figure 1). Table

1 depict the demographic and work-related information of participants. Most were females (n=64, 66.7%) and were aged between 20 and 29 years (n=45, 46.9%). Almost 70% were based in Khomas region and working in the private sector (n=74, 77.1%). Specifically, the majority were working for individually-owned physiotherapy clinics with an outpatient focus (n=43, 44.8%). The majority were fully registered PTs (n=68, 70.8%) with a Bachelor’s degree (n=86, 89.6%). However, the majority trained as PTs outside Namibia (n=82, 85.4%).

The years of clinical experience varied widely, but majority (n=49, 51.0%) were in the 0-5 years category. Although the majority (n=49, 51.0%) had no area of specialisation supported by an educational experience or professional qualification, most (n=68, 70.8%) had accrued continuing professional education certificates. The courses mainly related to Electrotherapy, Sports Physiotherapy, Manual Therapy, Women’s Health, Patient Safety and Infection Control, Pain Management among others. For those with a clinical specialty (n=47, 49.0%), the majority inclined to musculoskeletal physiotherapy (n=25, 53.2%). Chronic low back pain (CLBP) was the most common condition encountered. Pain, joint motion restrictions, abnormal postures, muscle length/strength imbalances, gait dysfunctions and breathing problems were some of the major clinical symptoms needing PT management. Most PTs regularly attended to adult patients only (n=65, 67.7%) and worked 30-39 clinical hours per week (n=38; 39.6%). Approximately 70.0% (n=67) of the participants reported completing less than 10 physiotherapeutic treatment sessions per day.

**Utilisation of standardised outcome measures**

All respondents received training to use SOMs at one stage of their educational or professional career. Nevertheless, 76.0% (n=73) indicated being recommended or mandated to use SOMs in daily clinical practice either by the professional society, regulatory body, supervisors or head of departments. Although 97.9% (n=94) indicated having used at least one SOMs in the last six months, the frequency of utilisation of SOMs varied among participants. Routine utilisation was reported in only 49.0% (n=47). There was an association between being mandated to use SOMs and routine SOMs utilisation ( $\chi^2=4.15, p=0.04$ ).

Table 2 shows the factors associated with routine utilisation of SOMs. The Chi-square test showed significant findings only for gender and area of specialisation. The proportion of female PTs (57.8%) who routinely used SOMs was significantly greater ( $p=0.01$ ) compared to males (31.3%). PTs with an area of clinical specialty (63.3%) significantly ( $p=0.004$ ) showed greater utilisation of SOMs compared to those without (34.0%). Table 3 shows model results for the binary logistic regression. The model was statistically significant,  $\chi^2 (2) = 16.4, p < .0001$ . Both gender ( $p=0.007$ ) and specialisation ( $p=0.002$ ) added significantly to the model. However, the model explained 16.0% to 21.0% of the variance in SOMs utilisation, and correctly classified 66.7% of cases.

The odds of utilising SOMs were 4.13 greater among PTs with a clinical specialty and 3.88 times greater for females as opposed to males.

**Table 3: Binary logistic regression results for predictors of SOMs utilisation**

	B	S.E	Wald	df	Sig	Exp(B)	95% CI*
Gender	1.355	0.50	7.38	1	0.007	3.88	1.46-10.3
Specialisation	1.418	0.46	9.41	1	0.002	4.13	1.67-10.2
Constant	-1.68	0.52	10.7	1	0.001	0.19	

Predicted probability is of membership for Yes (specialisation) and Female (Gender); Omnibus tests of model coefficients (Chi square=16.4, df =2, sig <0.001); Hosmer and Lemeshow test (Chi square=0.04, p=0.98); Model summary: Cox and Snell R Square=0.16; Nagelkerke R square=0.21; Percentage accuracy: 66.7%; B =beta coefficient ; Exp (B) =interpreted as adjusted odds ratios; \*95% CI=95 Confidence intervals (lower and upper values provided); df =degrees of freedom

## Discussion

Given the current shift toward evidence-based practice in health care, this study investigated the utilisation of SOMs and the participant or work-related associated factors among registered PTs and interns practicing in Namibia. The study response rate was consistent with existing studies utilising the same population<sup>4,8,15</sup>. The present study main findings showed almost half of the participants routinely utilised SOMs, with gender and clinical speciality being the associated factors. Interestingly, all participants received formal educational training in SOMs utilisation. These findings are commonly reported in previous studies<sup>11,12,20</sup>. From a neutral perspective, this is encouraging and shows global emphasis on the educational training of SOMs. Unlike some studies<sup>10,11</sup>, the present study was uniquely composed of participants with diverse educational backgrounds as most PTs in Namibia trained in countries such as Zimbabwe, Zambia, and South Africa. This could be explained by the non-existence of the physiotherapy program training local PTs up until 2018. Additionally, the fact that future PTs are trained to use SOMs highlights that SOMs are an integral component of patient assessment and evaluation. This probably accounts for the 97.9% participants indicating having used SOMs at least once in the last six months. Although this is a positive finding, there is need to continue emphasising and strengthening the teaching of SOMs in the global PT curricula. Locally, further studies are needed to ascertain the adequacy of the content underpinning the teaching of outcome measures to PT students at universities. Also, there is need to evaluate the extent of SOMs utilisation by clinical students and determine predictors of SOMs utilisation in graduate PTs transitioning from universities.

The current study showed that PTs are mandated to use SOMs in clinical practice. In fact, the present study found an association between being mandated and routine utilisation. Altogether, these findings have practical applications to AHPCNA, NSP and illustrate the importance of regulating and monitoring the use of SOMs by PTs. By so doing, this maintains the continued use of SOMs in the clinical space. However, there is need for future qualitative studies exploring the perspectives of various stakeholders such as AHPCNA, NSP, head of departments, and clinical managers on the perceived importance of utilising SOMs by clinical PTs. This evidence is non-existent in the local context. Such studies can reveal important information on the monitoring strategies currently being employed or need to be established in future to ensure routine usage of SOMs by registered PTs in Namibia.

Although all participants were trained to use SOMs and majority mandated to use them, the frequency of utilisation was surprising. Irrespective of type, almost half of the recruited participants indicated using SOMs 70% to 100%

of the time. These results show random approach towards routine SOMs utilisation despite evidence of training and obligatory mandates. Globally, policy and professional guidelines recommend PTs to use SOMs every time<sup>1,2</sup>. There is sparse data available in literature regarding the routine utilisation of SOMs by clinical PTs working in African settings. The limited studies available reported divergent utilisation rates owing to the differences in study designs, research settings, target population, sample characteristics, and operational definitions of SOMs utilisation.

In agreement with the present results, a cross-sectional study conducted in Ghana composed of 120 registered PTs revealed that only 47.6% used outcome measures<sup>10</sup>. Similarly, a cross-sectional study involving 74 Egyptian PTs reported routine utilisation of SOMs in 43.2% of the participants<sup>11</sup>. However, conclusions from these studies and the present study should be interpreted cautiously because of the differences in SOMs utilisation definition and sample characteristics. Unlike the present study, Agyenkwa et al<sup>10</sup> mainly included male PTs working largely with stroke patients in government hospitals. El-Sobke and Helmy<sup>11</sup> included young PTs largely working in both private and public sector. Although unclear how Agyenkwa et al<sup>10</sup> and El-Sobke and Helmy<sup>11</sup> defined SOMs utilisation for comparative purposes, the collective results from the present study and others<sup>10,11,21</sup> highlight unfavourable utilisation of SOMs by clinical PTs regardless of clinical domain and country of practice in Africa. Contextually, the perceived barriers contributing to the established utilisation require further investigation. However, evidence from literature has generally pointed to PT-related factors such as time constraints, lack of knowledge on the usefulness of SOMs and SOMs-related factors such as complicated operational language<sup>9,13,22</sup>. Nevertheless, there is need to standardise the operational definition of routine utilisation of SOMs in future studies for ease of comparison and to conduct robust systematic reviews appraising the utilisation rates of SOMs by PTs working in Africa. This will reveal the magnitude of this problem and inform strategies to ameliorate sporadic utilisation.

Briefly, the present study mainly represented a young cohort of female non-specialised PTs with a Bachelor's degree working mainly in private clinics in the capital city. The fact that the most participants worked in the capital city reflects the existing distribution of private and state hospitals/clinics in Namibia. Khomas region has the preponderance of public and private institutions offering PT treatments in the country. The fact that most participants were non-specialised PTs is accounted for by the majority having only graduate qualifications. Evidence from elsewhere has shown a significant association between having postgraduate professional qualifications such as Masters, PhD and SOMs utilisation<sup>23</sup>. These results indirectly support the need to establish postgraduate PT training in Namibia to align with

the evolving trends in PT education.

Female PTs were more likely to use SOMs compared to males. These findings have been shared and refuted by some previous studies<sup>16,23-26</sup>. Okonkwo et al<sup>23</sup> consistently showed that female PTs had better utilisation. However, Al-Muqiren et al<sup>15</sup> showed that gender had no relationship with SOMs utilisation. Differences in all these studies highlight the unclear influence of gender in determining SOMs utilisation. Although the present study sample had more female PTs, which is representative of the gender distribution of PTs working in Namibia, the reasons for this association are unclear and require further investigation. Females are reported to be inherently meticulous and are inclined to observe obligatory mandates stipulated by professional or regulatory authorities<sup>8</sup>.

The present study also showed that PTs who had an area of clinical specialisation showed better utilisation. Given that the majority did not have a professional postgraduate degree such as Masters, the operational definition of specialisation considered years of experience treating a unique group of patients and the inclination of the continued professional education courses certified. It seems with specialisation; there is an increased awareness towards SOMs utilisation probably based on a clear understanding of the perceived benefits of utilising SOMs. Contextually, the perceived factors facilitating the utilisation of SOMs among PTs still warrant further exploration. Despite differences in the operational definition of clinical specialty between studies, these present study findings have been consistently reported elsewhere<sup>24, 25</sup>.

### Strengths and limitations

This nationwide study was the first to investigate the utilisation of SOMs by clinical PTs in Namibia. The final sample mirrored the defining characteristics of the target population with regards to age, gender, location of work facility, educational qualifications among other factors. Additionally, the sample PTs had diverse PT educational backgrounds enriching the results. The questionnaire used had satisfactory indices for content validity and test-retest reliability. However, the following limitations need consideration when interpreting the results:

- The study was cross-sectional in design and it is premature to accept the findings until such a study has been repeated. A cause-effect relationship cannot be deduced between the utilisation of SOMs and the identified contributing factors. Robust study designs are preferable in future and there is need to triangulate utilisation findings with observational study designs.
- Although all qualified PTs and intern PTs were invited to participate and the study online link was kept open until no more responses were obtained, the response rate was unsatisfactory compromising the results to non-participation bias. Notwithstanding the several reminders sent, busy clinical schedules possibly accounts for the significant non-response rate since most participants worked in the private sector. Additionally, social desirability bias could also have influenced the response rate with those PTs routinely utilising SOMs agreeing to participate and conversely. Future research studies utilising clinical PTs probably need to consider participant availability issues, utilisation of face-to-face interviewer-administrated questionnaires and longer data collection period.

- Reliance on self-reports creates a possibility of recollection bias which can underestimate the utilisation rates for SOMs. The authors minimised that effect by only enquiring about the utilisation of SOMs in the last six months.

With self-reports, participants could report SOMs utilisation that happened before the specified six months period. This “forward telescoping”<sup>27</sup> phenomenon may overestimate the utilisation rates.

### Conclusion

This study demonstrated moderate utilisation of SOMs by Namibian PTs and interns despite evidence of training. There is need to raise awareness through different platforms to encourage utilisation of SOMs in clinical practice. Further studies investigating the perceived facilitators and barriers to SOMs utilisation are warranted in Namibia. Moreover, there is need for regular monitoring of SOMs utilisation by the AHPCNA and professional societies such as NSP. Female PTs and PTs with a clinical specialty showed greater utilisation rates. Future studies should investigate perceived barriers to SOMs utilisation among male PTs. For sustainable utilisation of SOMs, there is need to have postgraduate PT programmes in Namibia.

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### Competing interests

The authors declare no competing interests.

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### Authors contributions

MC, TWS, FK conceptualised the study. MC wrote and submitted the proposal for ethical clearance. MC, TWS, FK, EOG, CVDH and WM critically reviewed the proposal and made edits. FK and TWS liaised with Allied Health Professions Council of Namibia for participant information. EOG and CVDH were instrumental in data collection and follow-ups with participants. MC analysed the data and wrote the first draft of the manuscript. All authors edited all the other drafts. All authors read and approved the final manuscript.

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