its accessibility [30] whereas snowballing or networking is a form of convenience sampling where sample elements are identified by successive respondents within the organization or target group [31]. Snowballing and convenient sampling are appropriate in healthcare sector to minimize the chances of low survey response rates reported in healthcare industry [32].

4.2. Study sample profile

Structured questionnaires were self-administered to 186 healthcare practitioners in 50 healthcare organizations sampled. According to the Kenyan healthcare system, the hospitals are geographically grouped into four categories namely national, provincial, county and healthcare centres which also define the hospital size. National hospitals are the largest in size whereas healthcare centres are the smallest in size. Table 1 shows the sample profile of this study.

Table 1. Study sample profile

Characteristic *n=177*		Frequency	%
Organization ownership	Private	75	42.4
	Government	102	57.6
Geographic coverage	National	21	11.9
	Provincial	15	8.5
	County	90	50.8
	Health centre	51	28.8
Past collaborative projects	None	22	12.4
	1 - 3	124	70.1
	4+	31	17.5

In this study, all levels of hospitals were included in the sample. At the end of the field study, 9 questionnaires were not returned. The remaining 177 questionnaires were confirmed to be usable for further analyses.

4.3. Use of SPSS software for analyses

Statistical relationship between the two model factors examined in this paper (organization affiliation and organization collaborative innovation aspects) was examined using SPSS software. Firstly, the reliability test to measure the internal consistency of the model factors was determined using SPSS software. Cronbach alpha (α) is widely used to determine the internal consistency of test items before proceeding with any other statistical analyses. A value greater than 0.70 is recommended for a main field study although values ranging 0.50 to 0.69 are acceptable for preliminary studies. However, values greater than 0.90 may reflect unnecessary duplication of content across items and point more to redundancy than to homogeneity as they are testing the same question but in a different pretext. Therefore, a maximum Cronbach alpha value of 0.90 has been highly recommended [33]. Table II show the reliability test results of the model factors used in this research.

Table 2. Reliability test for model factors

Test factor (n=177)	α
ICT Infrastructure (ICT)	0.840
Organizational Affiliations (OrgAff)	0.792
Patient TM Adoption (PatTMAdp)	0.791
Organization Resources (OrgRes)	0.813
Organization Innovation Acceptance (OrgInnAcc)	0.810
Personnel Innovation Acceptance (PsnInnAcc)	0.842
Organization Innovative Capacities (OrgInnAcc)	0.831
Collaborative Innovation aspects (CoInno)	0.782
Internal Outcomes (InOut)	0.824
External Outcomes (ExOut)	0.842

The model factors have an acceptable level of Cronbach alpha $\alpha > 0.70$, therefore, all factors were accepted for statistical analyses.

5. Results

An inter-correlation test (r) was run to determine the level of relationship existing between the model factors. It was noted that no cases of multicollinearity existed between the model factors (see Table 3). Multicollinearity ($r > 0.90$) is the existence of a high level of relationship between variables which presents difficulties in accessing the importance of individual factors under study.

A strong positive relationship existed between organization affiliation and: organization ICT infrastructure (r= 0.621), organization resources (r=0.524), collaborative innovation aspects (r=0.524) and external innovation outcomes (r=0.522). Similarly, a strong positive relationship existed between organization collaborative innovation aspects and collaborative innovation external outcomes. Additionally, organization's ICT infrastructure presented a strong relationship with organization's innovative capacity (r=0.572). However, patient telemedicine adoption presented a small relationship with all model factors ($r < 0.29$).

Also, organizations with highly developed ICT infrastructure were observed to be more innovative than those with less developed ICT infrastructure (see Figure 3). ICT infrastructure was dichotomized into two groups namely low ICT infrastructure and high ICT infrastructure. Scores with 3 and below were classified as low ICT infrastructure whereas those with 4 and above were classified as high ICT infrastructure.

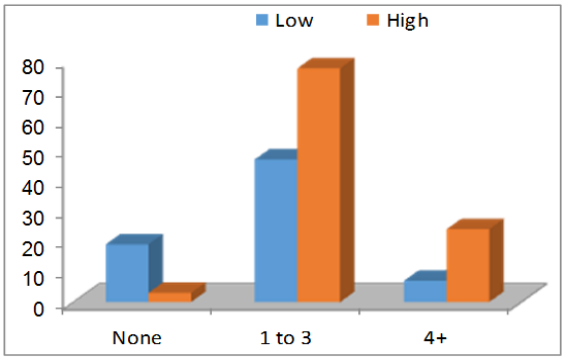


Figure 3. Collaborative innovation project based on level of ICT infrastructure

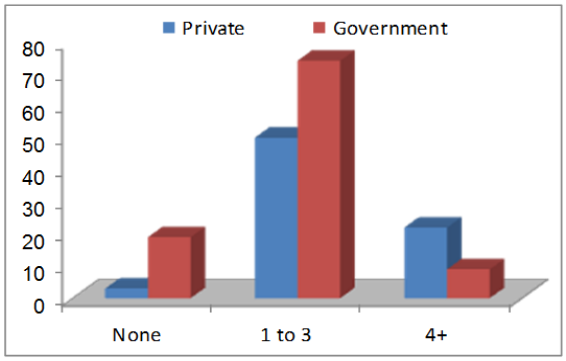


Figure 4. Collaborative innovation projectbased on organization ownership

Similarly, private owned organizations were observed to be more innovative than government owned organizations (see Figure 4). This was determined using the number of collaborative innovative projects carried out by the organizations.

Furthermore, Analyses of variance test (ANOVA) was used to examine the difference existing in collaborative innovation outcomes, ICT infrastructure and organization agility basing on healthcare geographic coverage.

It was observed that a significant difference in internal collaborative innovation outcomes existed between various organizations although no significant difference existed between national and provincial hospitals (see Table 4). However, no significant difference existed for external collaborative innovation outcomes using this basis in this study.

Table 3. Pearson's correlation matrix

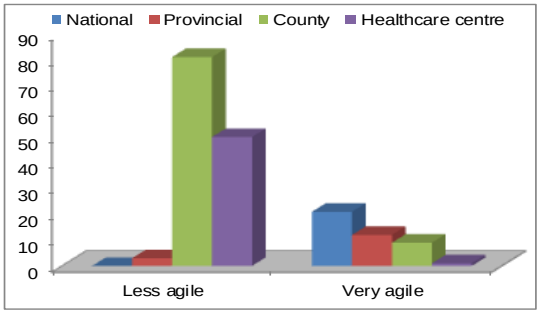
Variables	P1	P2	P3	F1	F2	F3	F4	F5	F6
P1 OrgAff	1								
P2 PatTMadp	0.015	1							
P3 ICT	0.621**	0.224**	1						
F1 OrgRes	0.524**	0.009	0.252**	1					
F2 OrgInnAcc	0.354**	0.123*	0.412**	0.529**	1				
F3 PsnInnAcc	0.042	0.062	0.325**	0.172**	0.402**	1			
F4 OrgInnCap	0.372**	0.021	0.572**	0.459**	0.442**	0.342**	1		
F5 OrgAg	0.425**	0.042	0.315**	0.447**	0.352**	0.384**	0.322**	1	
F6 CoInno	0.524**	0.062	0.411**	0.303**	0.259**	0.224**	0.382**	0.512**	1
O1 InOut	0.412**	0.082	0.412**	0.487**	0.421*	0.346**	0.295**	0.452**	0.314**
O2 ExOut	0.522**	0.102	0.392**	0.542**	0.292**	0.011	0.341**	0.462**	0.512**

Table 4. Collaborative innovation outcomes basing on geographic

Geographic coverage			Mean Difference	Sig.
Internal outcome	National	Provincial	0.111	0.080
		County	0.041	0.010
		Health centre	0.052	0.000
	Provincial	National	-0.111	0.080
		County	-0.070	0.011
		Health centre	-0.059	0.010
	County	National	-0.041	0.010
		Provincial	0.070	0.011
		Health centre	0.012	0.031
	Health centre	National	-0.052	0.000
		Provincial	0.059	0.010
		County	-0.012	0.031

Significant at: P < 0.05

Similarly, a significant difference existed in organizations agility. Majority of national and provincial hospitals were observed to be more agile than county and healthcare centres (see Figure 5).



Figurte 5. Organization agility based on geographic coverage

However, no significant difference existed in organization agility between national and provincial hospitals. The greatest difference existed between national hospitals and healthcare centres with a significant value of 0.000 (see Table 5).

Table 5. Organization agility basing geographic coverage

Geographic coverage		Mean Difference	Sig.
National	Provincial	-0.103	0.164
	County	-0.044	0.003
	Health centre	-0.114	0.000
Provincial	County	0.059	0.036
	Health centre	-0.011	0.001
County	Health centre	-0.070	0.040

Significant at: $P < 0.05$

Also, a significant difference in the level of ICT infrastructure existed between various organizations where national and provincial hospitals presented a higher level of ICT infrastructure when compared to county and healthcare centres (see Figure 6).

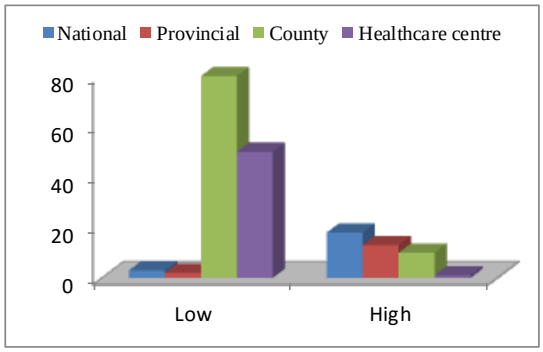


Figure 6. Organization level of ICT infrastructure basing on geographic coverage

However, no significant difference existed between national and provincial hospitals in terms of the level of ICT infrastructure (see Table 6).

Table 6. Organization ICT infrastructure basing on geographic coverage

Geographic coverage		Mean Difference	Sig.
National	Provincial	0.319	0.693
	County	0.249	0.005
	Health centre	0.192	0.000
Provincial	County	-0.071	0.031
	Health centre	-0.127	0.014
County	Health centre	-0.057	0.021

6. Discussion

From this study, organization collaboration was found to have a positive effect on organization resources. These results are consistent with previous studies which found out that organization partnership especially in state owned organizations opens innovation cycle to various actors and taps innovation resources across borders. This study further highlights the importance of collaboration between private and public healthcare organizations.

It was observed that private owned healthcare organizations have a higher level of ICT infrastructure when compared to government owned healthcare organizations. This is claimed to have contributed to the high level of innovativeness of the private owned healthcare organizations. A study on organization innovation highlighted that private healthcare organizations are more likely to innovate than public hospitals whose mission as a provider of last resort restrains their resources thus limiting their innovative capacity [34].

Within the context of healthcare personnel innovation acceptance, it was observed that organization affiliation does not influence personnel's willingness to adopt healthcare technological innovation. The results are consistent with previous studies where it as observed that the personnel's level of competencies on ICT influenced the adoption of healthcare technologies [35].

Furthermore, the results of this study showed that the innovativeness of healthcare organization basing on the geographic location (which defines the organization size) differed greatly. National and provincial hospitals were found to be more agile than county hospitals and healthcare centres. The difference in agility between national and provincial hospitals was not very significant. Also, the level of ICT infrastructure between the four categories namely national, provincial, county and healthcare centres differed greatly. National hospital had the highest level of ICT infrastructure when compared to provincial, county and healthcare centres.

Taking into account the results of this study, a rich understanding of the importance of healthcare organization collaboration can be fully realized in attempt to expedite the adoption of telemedicine in developing countries.

7. Conclusion

Despite large number of studies on barriers to telemedicine adoption in developing countries, high quality evidence on how to facilitate telemedicine adoption in developing countries is still lacking. Although extant literature has highlighted that organization collaboration can facilitate telemedicine adoption, studies with organizational designs on how organization collaboration can facilitate telemedicine adoption is lacking. Therefore, studies with rigorous designs are needed to examine organizational factors and innovation practices influencing organization collaboration in facilitating telemedicine adoption.

The regression analysis of this survey showed that organization affiliation is highly influenced by the status of organization's ICT infrastructure. Furthermore, organizations with a high level of ICT infrastructure were more innovative than the counterparts with low level of ICT infrastructure.

All the organizational model factors were supported and explained 46.5% of the variance in collaborative innovation internal outcomes. Similarly, all the organizational model factors except personnel innovation acceptance were supported and explained 53.2% of the variance in collaborative innovation external outcomes. The study produced useful insights into understanding the importance of organization collaboration in facilitating telemedicine adoption in developing countries.

8. Acknowledgment

We acknowledge the respondents who kindly gave their time to participate in this study. We also acknowledge that an earlier version of this material was presented in a conference at the International Conference on Information Society (i-Society 2015), held on 9th to 11th November 2015, London, UK.

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