Supplementary materials

PanAfrican Medical Journal

# Assessment of the nature of retail pharmacies in the Kingdom of Eswatini: implications for pharmaceutical policy and regulation

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**Annex 1:** relationship between location of retail pharmacies by region and area, building type, pharmacy type, ownership, registering organization, source of pharmaceuticals, service orientation and operating hours (N = 76)

| Variables | Region | | | | p-value | Cramér's V |
|---|---|---|---|---|---|---|
| | Manzini n (%) | Hhohho n (%) | Shiselweni n (%) | Lubombo n (%) | | |
| **Area** | | | | | 0.010* | 0.39 |
| Urban | 37 (48.7) | 18 (23.8) | 0 (0.0) | 2 (2.6) | | |
| Rural | 0 (0.0) | 2 (2.6) | 12 (15.8) | 5 (6.6) | | |
| **Building type** | | | | | 0.243 | 0.23 |
| Shopping mall | 35 (46.1) | 15 (19.7) | 11 (14.5) | 1 (1.3) | | |
| Separate | 1 (1.3) | 1 (1.3) | 1 (1.3) | 0 (0.0) | | |
| Any other | 1 (1.3) | 4 (5.3) | 0 (0.0) | 6 (7.9) | | |
| **Pharmacy type** | | | | | 0.381 | 0.20 |
| Chain | 24 (31.6) | 13 (17.1) | 5 (6.6) | 3 (3.9) | | |
| Independent | 13 (17.1) | 7 (9.2) | 7 (9.2) | 4 (5.3) | | |
| **Ownership** | | | | | 0.463 | 0.19 |
| Limited liability company | 27 (35.5) | 17 (22.4) | 8 (10.5) | 5 (6.6) | | |
| Partnership | 4 (5.3) | 2 (2.6) | 0 (0.0) | 1 (1.3) | | |
| Sole proprietorship | 6 (7.9) | 1 (1.3) | 4 (5.3) | 1 (1.3) | | |
| **Registering organization** | | | | | 0.785 | 0.12 |
| Both MOH and MOCTI | 36 (47.4) | 20 (26.3) | 12 (15.8) | 7 (9.2) | | |
| Only MOCTI | 1 (1.3) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | |
| **Pharmaceutical source(s)** | | | | | 0.678 | 0.23 |
| Domestic only (Eswatini) | 18 (23.7) | 8 (10.5) | 8 (10.5) | 4 (5.3) | | |
| Domestic + SADC | 17 (22.4) | 9 (11.8) | 4 (5.3) | 3 (3.9) | | |
| Local/SADC/Asia | 2 (2.6) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | |
| Local/SADC/Asia/America | 0 (0.0) | 1 (1.3) | 0 (0.0) | 0 (0.0) | | |
| Local/SADC/Europe | 0 (0.0) | 1 (1.3) | 0 (0.0) | 0 (0.0) | | |
| Local/SADC/Europe/Asia | 0 (0.0) | 1 (1.3) | 0 (0.0) | 0 (0.0) | | |
| **Service orientation** | | | | | 0.581 | 0.16 |
| Both (product and service) | 35 (46.1) | 18 (23.7) | 12 (15.8) | 7 (9.2) | | |
| Product only | 2 (2.6) | 2 (2.6) | 0 (0.0) | 0 (0.0) | | |
| **Operating hours** | | | | | 0.497 | 0.19 |
| ≥45 - <54 hours | 9 (11.8) | 2 (2.6) | 1 (1.3) | 3 (3.9) | | |
| ≥54 - <63 hours | 11 (14.5) | 6 (7.9) | 4 (5.3) | 1 (1.3) | | |
| ≥63 hours | 17 (22.4) | 12 (15.8) | 7 (9.2) | 3 (3.9) | | |

MOH: Ministry of Health; MOCTI: Ministry of Commerce, Trade and Industry; SADC: Southern African Development Community; *p-value statistically significant (< 0.05); percentages may not sum to 100% due to rounding or missing data

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**Annex 2:** relationship between location of retail pharmacies in specific areas (urban/rural) and building type, pharmacy type, ownership, registering organization, source of pharmaceuticals, service orientation and operating hours (N = 76)

| **Variables** | **Specific area** | | **p-value** | **Cramér's V** |
|---|---|---|---|---|
| | **Rural n (%)** | **Urban n (%)** | | |
| **Building type** | | | 0.030* | 0.304 |
| Shopping mall | 2 (2.6) | 65 (85.5) | | |
| Separate | 1 (1.3) | 2 (2.6) | | |
| Any other | 1 (1.3) | 5 (6.6) | | |
| **Pharmacy type** | | | 0.298 | 0.164 |
| Chain | 1 (1.3) | 44 (57.9) | | |
| Independent | 3 (3.9) | 28 (36.8) | | |
| **Ownership** | | | 0.405 | 0.154 |
| Limited liability company | 3 (3.9) | 54 (71.1) | | |
| Partnership | 1 (1.3) | 6 (7.9) | | |
| Sole proprietorship | 0 (0.0) | 12 (15.8) | | |
| **Registering organization** | | | 1.000 | 0.027 |
| Both MOH and MOCTI | 4 (5.3) | 71 (93.4) | | |
| Only MOCTI | 0 (0.0) | 1 (1.3) | | |
| **Pharmaceutical source(s)** | | | 0.518 | 0.236 |
| Local | 4 (5.3) | 34 (44.7) | | |
| Local and SADC | 0 (0.0) | 33 (43.4) | | |
| Local/SADC/Asia | 0 (0.0) | 2 (2.6) | | |
| Local/SADC/Asia/America | 0 (0.0) | 1 (1.3) | | |
| Local/SADC/Europe | 0 (0.0) | 1 (1.3) | | |
| Local/SADC/Asia/Europe | 0 (0.0) | 1 (1.3) | | |
| **Service orientation** | | | 1.000 | 0.056 |
| Both (product and service) | 4 (5.3) | 68 (89.5) | | |
| Only product | 0 (0.0) | 4 (5.3) | | |
| **Operating hours** | | | 0.016* | 0.331 |
| ≥45 - <54 hours | 3 (3.9) | 12 (15.8) | | |
| ≥54 - <63 hours | 0 (0.0) | 22 (28.9) | | |
| ≥63 hours | 1 (1.3) | 38 (50.0) | | |

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**Annex 3:** relationship between specific building and pharmacy type of retail pharmacies, ownership, registering organization, source of pharmaceuticals, service orientation and operating hours (N = 76)

| **Variables** | **Specific building** | | | **p-value** | **Cramér's V** |
|---|---|---|---|---|---|
| | **Shopping mall n (%)** | **Separate n (%)** | **Any other n (%)** | | |
| **Pharmacy type** | | | | 0<001* | 0.442 |
| Chain | 45 (59.2) | 0 (0.0) | 0 (0.0) | | |
| Independent | 22 (28.9) | 3 (3.9) | 6 (7.9) | | |
| **Ownership** | | | | 0.626 | 0.131 |
| Limited liability company | 49 (64.5) | 3 (3.9) | 5 (6.6) | | |
| Partnership | 6 (7.9) | 0 (0.0) | 1 (1.3) | | |
| Sole proprietorship | 12 (15.8) | 0 (0.0) | 0 (0.0) | | |
| **Registering organization** | | | | 0.934 | 0.042 |
| Both MOH and MOCTI | 66 (86.8) | 3 (3.9) | 6 (7.9) | | |
| Only MOCTI | 1 (1.3) | 0 (0.0) | 0 (0.0) | | |
| **Pharmaceutical source(s)** | | | | 0.776 | 0.206 |
| Local | 30 (39.5) | 3 (3.9) | 5 (6.6) | | |
| Local and SADC | 32 (42.1) | 0 (0.0) | 1 (1.3) | | |
| Local/SADC/Asia | 2 (2.6) | 0 (0.0) | 0 (0.0) | | |
| Local/SADC/Asia/America | 1 (1.3) | 0 (0.0) | 0 (0.0) | | |
| Local/SADC/Europe | 1 (1.3) | 0 (0.0) | 0 (0.0) | | |
| Local/SADC/Asia/Europe | 1 (1.3) | 0 (0.0) | 0 (0.0) | | |
| **Service orientation** | | | | 0.404 | 0.155 |
| Both (product and service) | 64 (84.2) | 3 (3.9) | 5 (6.6) | | |
| Only product | 3 (3.9) | 0 (0.0) | 1 (1.3) | | |
| **Operating hours** | | | | 0.215 | 0.195 |
| ≥45 - <54 hours | 11 (14.6) | 2 (2.6) | 2 (2.6) | | |
| ≥54 - <63 hours | 21 (27.6) | 0 (0.0) | 1 (1.3) | | |
| ≥63 hours | 35 (46.1) | 1 (1.3) | 3 (3.9) | | |

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| **Annex 4:** relationship between retail pharmacy type and ownership, registering organization, source of pharmaceuticals, service orientation and operating hours (N = 76) | | | | |
|---|---|---|---|---|
| **Variables** | **Types of retail pharmacy** | | **p-value** | **Cramér's V** |
| | **Chain n (%)** | **Independent n (%)** | | |
| **Ownership** | | | 0.168 | 0.217 |
| Limited liability company | 34 (44.7) | 23 (30.3) | | |
| Partnership | 6 (7.9) | 1 (1.3) | | |
| Sole proprietorship | 5 (6.6) | 7 (9.2) | | |
| **Registering organization** | | | 0.408 | 0.139 |
| Both MOH and MOCTI | 45 (59.2) | 30 (39.5) | | |
| Only MOCTI | 0 (0.0) | 1 (1.3) | | |
| **Pharmaceutical source(s)** | | | 0.075 | 0.363 |
| Local | 17 (22.4) | 21 (27.6) | | |
| Local and SADC | 24 (31.6) | 9 (11.8) | | |
| Local/SADC/Asia | 2 (2.6) | 0 (0.0) | | |
| Local/SADC/Asia/America | 1 (1.3) | 0 (0.0) | | |
| Local/SADC/Europe | 0 (0.0) | 1 (1.3) | | |
| Local/SADC/Asia/Europe | 1 (1.3) | 0 (0.0) | | |
| **Service orientation** | | | 1.000 | 0.044 |
| Both (product and service) | 43 (56.6) | 29 (38.2) | | |
| Only product | 2 (2.6) | 2 (2.6) | | |
| **Operating hours** | | | 0.203 | 0.205 |
| ≥45 - <54 hours | 6 (7.9) | 9 (11.8) | | |
| ≥54 - <63 hours | 13 (17.1) | 9 (11.8) | | |
| ≥63 hours | 26 (34.2) | 13 (17.1) | | |
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**Annex 5:** relationship between ownership types and registering organization of retail pharmacies, source of pharmaceuticals, service orientation and operating hours (N = 76)

| **Variables** | **Ownership of retail pharmacy** | | | **p-value** | **Cramér's V** |
|---|---|---|---|---|---|
| | **Limited liability company n (%)** | **Partnership n (%)** | **Sole proprietorship n (%)** | | |
| **Registering organization** | | | | 0.845 | 0.067 |
| Both MOH and MOCTI | 56 (73.7) | 7 (9.2) | 12 (15.8) | | |
| Only MOCTI | 1 (1.3) | 0 (0.0) | 0 (0.0) | | |
| **Pharmaceutical source(s)** | | | | 0.484 | 0.250 |
| Local | 24 (31.6) | 7 (9.2) | 7 (9.2) | | |
| Local and SADC | 28 (36.8) | 0 (0.0) | 5 (6.6) | | |
| Local/SADC/Asia | 2 (2.6) | 0 (0.0) | 0 (0.0) | | |
| Local/SADC/Asia/America | 1 (1.3) | 0 (0.0) | 0 (0.0) | | |
| Local/SADC/Europe | 1 (1.3) | 0 (0.0) | 0 (0.0) | | |
| Local/SADC/Asia/Europe | 1 (1.3) | 0 (0.0) | 0 (0.0) | | |
| **Service orientation** | | | | 0.405 | 0.154 |
| Both (product and service) | 54 (71.1) | 6 (7.9) | 12 (15.8) | | |
| Only product | 3 (3.9) | 1 (1.3) | 0 (0.0) | | |
| **Operating hours** | | | | 0.894 | 0.085 |
| ≥45 - <54 hours | 10 (13.2) | 2 (2.6) | 3 (3.9) | | |
| ≥54 - <63 hours | 16 (21.1) | 2 (2.6) | 4 (5.3) | | |
| ≥63 hours | 31 (40.8) | 3 (3.9) | 5 (6.6) | | |

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**Annex 6:** relationship between service orientation and ownership types of retail pharmacies, registering organization, source of pharmaceuticals and operating hours (N = 76)

| **Variables** | **Orientation of the pharmacy** | | **p-value** | **Cramér's V** |
|---|---|---|---|---|
| | **Both (product and service) n (%)** | **Only product n (%)** | | |
| **Ownership** | | | 0.405 | 0.154 |
| Limited liability company | 54 (71.1) | 3 (3.9) | | |
| Partnership | 6 (7.9) | 1 (1.3) | | |
| Sole proprietorship | 12 (15.8) | 0 (0.0) | | |
| **Registering organization** | | | 1.000 | 0.027 |
| Both MOH and MOCTI | 71 (93.4) | 4 (5.3) | | |
| Only MOCTI | 1 (1.3) | 0 (0.0) | | |
| **Pharmaceutical source(s)** | | | 0.001* | 0.520 |
| Local | 35 (46.1) | 3 (3.9) | | |
| Local and SADC | 3 (3.9) | 0 (0.0) | | |
| Local/SADC/Asia | 2 (2.6) | 0 (0.0) | | |
| Local/SADC/Asia/America | 0 (0.0) | 1 (1.3) | | |
| Local/SADC/Europe | 1 (1.3) | 0 (0.0) | | |
| Local/SADC/Asia/Europe | 1 (1.3) | 0 (0.0) | | |
| **Operating hours** | | | 0.517 | 0.132 |
| ≥45 - <54 hours | 15 (19.7) | 0 (0.0) | | |
| ≥54 - <63 hours | 21 (27.6) | 1 (1.3) | | |
| ≥63 hours | 36 (47.4) | 3 (3.9) | | |

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