Supplemental Digital Content 2: Multi level Mixed-effects linear and logistic regression models using raw data (complete cases) and imputed data

**Table 1: The effect of GSP on depression cases 24 months after treatment (Raw data)**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Complete Case Sample** | | | | **Imputed Sample** | | | |
| **Independent Variable** | **Sample size** | **Odds ratio** | **95%CI** | **P-value** | **Sample size** | **Odds ratio** | **95%CI** | **P-value** |
| **Baseline Intervention difference in depression cases**  GHE  GSP | 542  561 | 1  0.926 | 1  0.422 - 2.032 | 0.849 | 562  578 | 1  0.926 | 0.451-1.902 | 0.836 |
| **Time period after treatment**  2 months  6 months  12 months  18 months  24 months | 1074  1020  974  1058  1013 | 0.009  0.048  0.110  0.035  0.036 | 0.006 - 0.013  0.033 - 0.068  0.077 - 0.157  0.025 - 0.051  0.025 - 0.053 | 0.000  0.000  0.000  0.000  0.000 | 1140  1140  1140  1140  1140 | 0.002  0.017  0.023  0.016  0.013 | 0.001 -0.003  0.011 -0.027  0.014 -0.036  0.010 -0.026  0.008 -0.022 | 0.000  0.000  0.000  0.000  0.000 |
| **Interaction between time and intervention arms**  Intervention X time period (2 months)  Intervention X time period (6 months)  Intervention X time period (12 months)  Intervention X time period (18 months)  Intervention X time period (24 months) | 1074  1020  974  1058  1013 | 0.498  0.088  0.051  0.096  0.129 | 0.269 - 0.922  0.049 - 0.158  0.029 - 0.091  0.052 - 0.176  0.072 - 0.232 | 0.026  0.000  0.000  0.000  0.000 | 1140  1140  1140  1140  1140 | 0.247  0.013  0.011  0.013  0.002 | 0.104 -0.587  0.004 -0.035  0.004 -0.029  0.004 -0.036  0.0002 -0.018 | 0.002  0.000  0.000  0.000  0.000 |
| **Baseline Covariates** |  |  |  |  |  |  |  |  |
| Function score | 1119 | 0.949 | 0.907 - 0.994 | 0.027 | 1140 | 0.974 | 0.926 - 1.023 | 0.302 |
| Employment status  Unemployed  Employed  Peasant farmer | 405  113  622 | 1  1.265  1.120 | 1  0.893 - 1.795  0.854 - 1.468 | 0.187  0.412 | 405  113  622 | 1  0.671  0.908 | 1  0.449 - 1.002  0.671 - 1.230 | 0.051  0.536 |
| Marital status  Single  Married  Separated  Widow | 151  861  87  37 | 1  1.054  1.439  1.256 | 1  0.798 - 1.393  0.947 - 2.185  0.812 - 1.944 | 0.709  0.088  0.306 | 151  861  87  37 | 1  1.406  1.509  1.863 | 1  1.042 - 1.890  0.941 - 2.420  1.107 - 3.136 | 0.026  0.087  0.019 |
| ART Adherence | 1099 | 0.994 | 0.991 - 0.998 | 0.007 | 1140 | 0.997 | 0.993 – 1.002 | 0.367 |

**Abbreviations:** CI, confidence interval

**Table 2: The effect of GSP on function scores 24 months after treatment**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Complete Case Sample** | | | | **Imputed Sample** | | | |
| **Independent Variable** | **Sample size** | **β coeffient** | **95%CI** | **P-value** | **Sample size** | **β coeffient** | **95%CI** | **P-value** |
| **Baseline Intervention difference in function scores**  GHE  GSP | 555  564 | 1  -1.148 | 1  -1.679 - ̄0.617 | 0.000 | 562  578 | 1  -1.159 | -1.808 - 0.511 | 0.000 |
| **Time period after treatment**  2 months  6 months  12 months  18 months  24 months | 1078  1012  973  1056  1015 | 3.550  1.206  0.365  0.609  0.987 | 3.311 - 3.790  0.958 - 1.452  0.113 - 0.617  0.365 - 0.854  0.739 - 1.235 | 0.000  0.000  0.004  0.000  0.000 | 1140  1140  1140  1140  1140 | 3.577  1.313  0.408  0.632  1.077 | 3.334 - 3.819  1.057 - 1.569  0.141 - 0.676  0.389 - 0.875  0.814 - 1.340 | 0.000  0.000  0.003  0.000  0.000 |
| **Interaction between time and intervention arms**  Intervention X time period (2 months)  Intervention X time period (6 months)  Intervention X time period (12 months)  Intervention X time period (18 months)  Intervention X time period (24 months) | 1078  1012  973  1056  1015 | 1.569  4.234  5.110  4.859  4.589 | 1.232 - 1.907  3.890 - 4.577  4.763 - 5.458  4.518 - 5.199  4.246 - 4.933 | 0.000  0.000  0.000  0.000  0.000 | 1140  1140  1140  1140  1140 | 1.510  4.100  5.076  4.827  4.499 | 1.165 - 1.855  3.758 - 4.443  4.712 - 5.439  4.485 - 5.168  4.134 - 4.864 | 0.000  0.000  0.000  0.000  0.000 |
| **Baseline Covariates** | | | | | | | | |
| Employment status  Unemployed  Employed  Peasant farmer | 405  113  622 | 1  0.082  -0.026 | 1  -0.133 - 0.296  -0.191 - 0.138 | 0.456 0.752 | 405  113  622 | 1  0.105  0.006 | -0.093 - 0.305  -0.151-0.164 | 0.298  0.935 |
| Marital status  Single  Married  Separated  Widow | 151  861  87  37 | 1  -0.094  -0.174  -0.319 | 1  -0.261 - 0.072  -0.425 - 0.076  -0.575 - ̄ 0.065 | 0.267 0.173  0.014 | 151  861  87  37 | 1  -0.123  -0.157  -0.282 | -0.291-0.044  -0.403 - 0.087  -0.530 - -0.034 | 0.147  0.207  0.025 |
| Baseline ART Adherence | 1099 | 0.001 | -0.001 - 0.004 | 0.000 | 1140 | 0.0005 | -0.002-0.003 | 0.697 |

**Table 3: The effect of GSP on adherence rates 24 months after treatment**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Complete Case Sample** | | | | **Imputed Sample** | | | |
| **Independent Variable** | **Sample size** | **Odds ratio** | **95%CI** | **P-value** | **Sample size** | **Odds ratio** | **95%CI** | **P-value** |
| **Baseline Intervention difference in function scores**  GHE  GSP | 540  559 | 1  0.52 | 1  0.22 - ̄1.23 | 0.318 | 562  578 | 1  0.53 | 0.23–1.21 | 0.131 |
| **Time period after treatment**  6 months  12 months  18 months  24 months | 1018  971  1054  996 | 16.90  3.82  1.77  5.04 | 8.01 - 35.67  2.45–5.94  1.22–2.56  3.12- 8.13 | 0.000  0.000  0.002  0.000 | 1140  1140  1140  1140 | 16.38  3.75  1.77  4.93 | 7.76–34.57  2.42–5.82  1.23–2.55  3.06–7.94 | 0.000  0.000  0.002  0.000 |
| **Interaction between time and intervention arms**  Intervention X time period (6 months)  Intervention X time period (12 months)  Intervention X time period (18 months)  Intervention X time period (24 months) | 1018  971  1054  996 | 2.26  10.18  70.90  24.97 | 0.77 – 6.62  4.16–24.88  19.75–254.41  6.72–92.77 | 0.128  0.000  0.000  0.000 | 1140  1140  1140  1140 | 1.87  7.01  58.14  20.88 | 0.67 – 5.25  3.10–18.81  16.64–203.16  5.78–75.33 | 0.231  0.000  0.000  0.000 |
| **Baseline Covariates** | | | | | | | | |
| Employment status  Unemployed  Employed  Peasant farmer | 405  113  622 | 1  1.06  0.75 | 1  0.62- 1.85  0.51–1.09 | 0.8140.140 | 405  113  622 | 1  1.02  0.71 | 0.62–1.67  0.50 – 0.99 | 0.949  0.047 |
| Marital status  Single  Married  Separated  Widow | 151  861  87  37 | 1  0.85  0.92  1.36 | 1  0.56–1.28  0.48–1.75  0.67 - 2.77 | 0.450 0.795  0.385 | 151  861  87  37 | 1  0.81  0.81  1.14 | 0.56 – 1.17  0.43–1.50  0.58–2.23 | 0.272  0.498  0.697 |
| Baseline Function scores | 1099 | 0.98 | 0.92–1.05 | 0.605 | 1140 | 0.99 | 0.94-1.06 | 0.957 |

**Table 3: The effect of GSP on viral suppression 24 months after treatment**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Complete Case Sample** | | | | **Imputed Sample** | | | |
| **Independent Variable** | **Sample size** | **Odds ratio** | **95%CI** | **P-value** | **Sample size** | **Odds ratio** | **95%CI** | **P-value** |
| **Baseline Intervention difference in function scores**  GHE  GSP | 418  440 | 1  0.82 | 1  0.32 - ̄2.13 | 0.697 | 562  578 | 1  1.33 | 0.58–3.05 | 0.492 |
| **Time period after treatment**  12 months  24 months | 958  993 | 1.13  2.98 | 0.64 - 1.99  1.45–6.14 | 0.656  0.003 | 1140  1140 | 11.44  29.36 | 7.38–17.72  15.60–55.24 | 0.000  0.000 |
| **Interaction between time and intervention arms**  Intervention X time period (12 months)  Intervention X time period (24 months) | 958  993 | 1.56  5.54 | 0.71–3.47  4.246 - 4.933 | 0.271  0.010 | 1140  1140 | 1.08  3.38 | 0.57 –2.02  1.02–11.20 | 0.817  0.046 |
| **Baseline Covariates** | | | | | | | | |
| Employment status  Unemployed  Employed  Peasant farmer | 405  113  622 | 1  0.61  0.73 | 1  0.30–1.22  0.41–1.28 | 0.160 0.840 | 405  113  622 | 1  1.55  1.19 | 0.93–2.59  0.85 – 1.68 | 0.092  0.298 |
| Marital status  Single  Married  Separated  Widow | 151  861  87  37 | 1  1.49  1.20  1.42 | 1  0.87–2.54  0.50–2.87  0.60– 3.35 | 0.1400.679  0.419 | 151  861  87  37 | 1  1.28  1.09  1.45 | 0.89 – 1.83  0.60–1.97  0.65– 2.01 | 0.175  0.772  0.632 |
| Baseline Function scores | 1119 | 0.93 | 0.85-1.02 | 0.126 | 1140 | 1.01 | 0.95 – 1.08 | 0.703 |
| Baseline ART Adherence | 1099 | 0.99 | 0.98–1.01 | 0.709 | 1140 | 1.01 | 0.82-1.23 | 0.952 |