Analysis Report

This report is structured as follows.

Contents

Sample Characterization

The initial sample had 336 individuals (N = 336). The table below shows the gender distribution. Mean age of the sample was 32.04 years old with a standard deviation of 11.13. Age ranged from 20 to 81 years old.

Value	Frequency	Percentage
Male	186	55.4
Female	145	43.2
Non Conforming	4	1.2
Queer Identified	1	0.3

The table below shows the means and standard deviations for Age per gender.

Gender	Mean	SD
Male	32.478	9.975
Female	32.428	12.630
Non Conforming	27.500	2.380
Queer Identified	34.000	NA

Reliability Analysis

Before testing the models, an initial refinement of the scales was performed using reliability analysis. Cronbach's Alphas were calculated. Whenever Alpha was lower than 0.700 for a given scale, items with correlations lower than 0.300 to the total scales were dropped until a solution with Alpha higher than 0.700 was obtained (when possible).

The items that were dropped were not contributing meaningfully to the internal consistency of the scale. A low item-total correlation indicates that the item is not closely related to the total score, meaning it is not aligned with the overall construct the scale aims to measure. A low Cronbach's Alpha suggests the item isn't reliable in terms of internal consistency. The following scales were refined:

RWA Scale: Six items were dropped, with item-total correlations ranging from -0.060 to 0.030. Not only are these below the 0.300 threshold, but some are also negative, suggesting they might even be detrimental to the scale.

Agreeableness Scale: Two items were dropped. While Q26_10 has a correlation of 0.209, which is closer to the acceptable range, it still falls short of the 0.300 threshold. Q26_1 is considerably lower at 0.063.

Openness Scale: Three items were dropped. Notably, Q26_18 has an item-total correlation of 0.299, just slightly below the 0.300 cut-off. Two other items showed correlations close to 0. A summary of the correlations is below.

RWA

- Q28_14: -0.006514
- Q28_8: 0.027218
- Q28_2: 0.029957
- Q28_10: 0.001750
- Q28_4: -0.020826
- Q28_6: -0.060337

Agreeableness

- Q26_1: 0.062557
- Q26_10: 0.209160

Openness

- Q26_13: -0.070203
- Q26_16: -0.005095
- Q26_18: 0.298930

Even with this procedure, Openness still showed a Cronbach's Alpha lower than 0.700, suggesting lower-than-adequate reliability for this factor.

The table below provides the descriptive statistics of the items that were retained, along with the scales statistics and Cronbach's Alphas.

Scale	Item	Mean	SD	Cronbach's Alpha
AMI	Q24_1	3.155	1.541	
AMI	Q24_2	3.443	1.471	
AMI	Q24_3	3.521	1.488	
AMI	Q24_4	3.524	1.437	
AMI	Q24_5	3.503	1.58	
AMI	Q24_6	3.402	1.459	
AMI	Q24_7	3.405	1.562	
AMI	Q24_8	3.75	1.407	
AMI	Q24_9	3.765	1.282	
AMI	Q24_10	3.196	1.485	
AMI	Q24_11	3.354	1.451	
AMI	Q24_12	3.542	1.564	
AMI	Q24_13	3.705	1.433	

Scale	Item	Mean	SD	Cronbach's Alpha
AMI	Q24_14	3.866	1.312	
AMI	Q24_15	3.723	1.319	
AMI	Q24_16	3.432	1.584	
AMI	Q24_17	3.655	1.404	
AMI	Q24_18	3.893	1.425	
AMI	Q24_19	3.545	1.457	
AMI	Q24_20	3.241	1.531	
AMI	AMI (Composite Scale)	3.531	0.897	0.913
ASI	Q23_1	3.402	1.632	
ASI	Q23_2	3.292	1.482	
ASI	Q23_3	3.161	1.364	
ASI	Q23_4	3.533	1.412	
ASI	Q23_5	3.485	1.478	
ASI	Q23_6	3.22	1.449	
ASI	Q23_7	3.083	1.424	
ASI	Q23_8	3.491	1.437	
ASI	Q23_9	3.759	1.388	
ASI	Q23_10	3.598	1.529	
ASI	Q23_11	3.5	1.486	
ASI	Q23_12	3.696	1.56	
ASI	Q23_13	3.42	1.429	
ASI	Q23_14	3.393	1.374	
ASI	Q23_15	3.402	1.505	
ASI	Q23_16	3.467	1.527	
ASI	Q23_17	3.616	1.502	
ASI	Q23_18	3.077	1.343	
ASI	Q23_19	3.509	1.412	
ASI	Q23_20	3.143	1.485	
ASI	Q23_21	3.22	1.41	
ASI	Q23_22	3.548	1.517	
ASI	ASI (Composite Scale)	3.41	0.702	0.841
SDO	Q27_1	2.896	1.267	
SDO	Q27_2	2.61	1.194	
SDO	Q27_3	2.86	1.237	
SDO	Q27_4	2.759	1.262	
SDO	Q27_5	2.881	1.287	
SDO	Q27_6	2.857	1.266	
SDO	Q27_7	2.714	1.282	
SDO	Q27_8	2.872	1.257	
SDO	Q27_9	2.446	1.25	
SDO	Q27_10	2.458	1.171	
SDO	Q27_11	2.417	1.143	
SDO	Q27_12	2.375	1.126	
SDO	Q27_13	2.405	1.134	
SDO	Q27_14	2.387	1.076	
SDO	Q27_15	2.658	1.179	
SDO	Q27_16	2.327	1.122	
SDO	SDO (Composite Scale)	2.62	0.689	0.863
RWA	Q28_1	3.384	1.176	
RWA	Q28_3	3.054	1.186	
RWA	Q28_5	2.923	1.327	
RWA	Q28_7	2.94	1.278	
RWA	Q28_9	3.211	1.172	
RWA	Q28_11	3.482	1.138	
RWA	Q28_12	2.631	1.139	
RWA	Q28_13	3.426	1.205	

Scale	Item	Mean	SD	Cronbach's Alpha
RWA	Q28_15	3.452	1.223	
RWA	RWA (Composite Scale)	3.167	0.663	0.712
Agreeableness	Q26_3	3.467	1.106	
Agreeableness	Q26_5	3.256	1.194	
Agreeableness	Q26_7	3.464	1.1	
Agreeableness	Q26_9	3.435	1.085	
Agreeableness	Q26_12	3.435	1.066	
Agreeableness	Q26_14	3.122	1.12	
Agreeableness	Q26_17	3.449	1.078	
Agreeableness	Agreeableness (Composite Scale)	3.375	0.666	0.706
Openness	Q26_2	3.298	1.088	
Openness	Q26_4	3.649	1.102	
Openness	Q26_6	3.452	0.985	
Openness	Q26_8	3.562	1.069	
Openness	Q26_11	3.438	1.08	
Openness	Q26_15	3.36	1.089	
Openness	Openness (Composite Scale)	3.46	0.655	0.667

To enable the calculation of statistics disaggregated by Gender, the items were averaged to form the scales' scores. The table below shows these results for all genders with at least 3 respondents.

Scale	Male		Female		Non-Conforming	
	Mean	SD	Mean	SD	Mean	SD
AMI	3.624	0.822	3.380	0.961	4.612	0.880
ASI	3.531	0.528	3.242	0.848	3.807	0.859
SDO	2.756	0.562	2.435	0.797	2.984	0.079
RWA	3.244	0.618	3.054	0.706	3.556	0.635
Agreeableness	3.308	0.631	3.470	0.706	3.286	0.421
Openness	3.433	0.609	3.487	0.707	3.750	0.948

Structural Equation Models

Measurement Models – Confirmatory Factor Analysis (CFA)

Initial CFA analyses for both ASI and AMI models yielded poor fit indicators: ASI ($\chi^2(5, N=336) = 5656.56$, $p < .001$, RMSEA = 0.083, SRMR = 0.119) and AMI ($\chi^2(5, N=336) = 5298.60$, $p < .001$, RMSEA = 0.084, SRMR = 0.119). Factor loadings under 0.400 and low covariances in the 'Openness' construct were notable issues.

After removing items with subpar loadings, the reanalyzed models had non-positive covariance matrices. No over-identification or multicollinearity were found. The 'Openness' construct showed not only poor covariances but also low variance (0.222) and reliability ($\alpha < 0.700$), leading to its exclusion from subsequent analyses.

Upon removing 'Openness,' the models improved: ASI ($\chi^2(4, N=336) = 2051.43$, $p < .001$, RMSEA = 0.079, SRMR = 0.076) and AMI ($\chi^2(6, N=336) = 2686.17$, $p < .001$, RMSEA = 0.083, SRMR = 0.085). Final factor loadings for the AMI model are provided below.

Factor		Item	Std λ	SE	pvalue
AMI	=~	Q24_1	0.563	0.038	0.000
AMI	=~	Q24_2	0.519	0.042	0.000
AMI	=~	Q24_3	0.574	0.037	0.000
AMI	=~	Q24_4	0.569	0.041	0.000
AMI	=~	Q24_5	0.635	0.035	0.000
AMI	=~	Q24_6	0.485	0.045	0.000
AMI	=~	Q24_7	0.605	0.036	0.000
AMI	=~	Q24_8	0.406	0.048	0.000
AMI	=~	Q24_9	0.384	0.053	0.000
AMI	=~	Q24_10	0.576	0.040	0.000
AMI	=~	Q24_11	0.469	0.042	0.000
AMI	=~	Q24_12	0.586	0.038	0.000
AMI	=~	Q24_13	0.511	0.042	0.000
AMI	=~	Q24_14	0.541	0.050	0.000
AMI	=~	Q24_15	0.466	0.051	0.000
AMI	=~	Q24_16	0.647	0.032	0.000
AMI	=~	Q24_17	0.555	0.042	0.000
AMI	=~	Q24_18	0.454	0.049	0.000
AMI	=~	Q24_19	0.513	0.047	0.000
AMI	=~	Q24_20	0.596	0.037	0.000
SDO	=~	Q27_1	0.724	0.038	0.000
SDO	=~	Q27_2	0.641	0.042	0.000
SDO	=~	Q27_3	0.624	0.045	0.000
SDO	=~	Q27_4	0.654	0.039	0.000
SDO	=~	Q27_5	0.657	0.038	0.000
SDO	=~	Q27_6	0.688	0.035	0.000
SDO	=~	Q27_7	0.735	0.029	0.000
SDO	=~	Q27_8	0.725	0.038	0.000
SDO	=~	Q27_11	0.350	0.061	0.000

RWA	=~	Q28_1	0.590	0.044	0.000
RWA	=~	Q28_3	0.399	0.065	0.000
RWA	=~	Q28_5	0.558	0.050	0.000
RWA	=~	Q28_7	0.421	0.067	0.000
RWA	=~	Q28_9	0.585	0.047	0.000
RWA	=~	Q28_11	0.540	0.052	0.000
RWA	=~	Q28_13	0.590	0.045	0.000
RWA	=~	Q28_15	0.580	0.045	0.000
Agreeableness	=~	Q26_3	0.607	0.062	0.000
Agreeableness	=~	Q26_7	0.576	0.059	0.000
Agreeableness	=~	Q26_9	0.596	0.065	0.000
Agreeableness	=~	Q26_12	0.628	0.061	0.000
Agreeableness	=~	Q26_17	0.552	0.053	0.000

The table below shows the same results for the ASI measurement model.

Factor		Item	Std	SE	pvalue
ASI	=~	Q23_1	0.597	0.041	0.000
ASI	=~	Q23_2	0.651	0.037	0.000
ASI	=~	Q23_4	0.686	0.034	0.000
ASI	=~	Q23_5	0.676	0.033	0.000
ASI	=~	Q23_8	0.624	0.044	0.000
ASI	=~	Q23_9	0.528	0.051	0.000
ASI	=~	Q23_10	0.693	0.036	0.000
ASI	=~	Q23_11	0.652	0.038	0.000
ASI	=~	Q23_12	0.602	0.044	0.000
ASI	=~	Q23_14	0.687	0.041	0.000
ASI	=~	Q23_15	0.669	0.041	0.000
ASI	=~	Q23_16	0.690	0.037	0.000
ASI	=~	Q23_17	0.671	0.040	0.000
ASI	=~	Q23_19	0.422	0.059	0.000
ASI	=~	Q23_20	0.565	0.047	0.000
ASI	=~	Q23_22	0.534	0.048	0.000
SDO	=~	Q27_1	0.685	0.038	0.000
SDO	=~	Q27_2	0.588	0.045	0.000
SDO	=~	Q27_3	0.596	0.042	0.000
SDO	=~	Q27_4	0.590	0.041	0.000
SDO	=~	Q27_5	0.623	0.035	0.000
SDO	=~	Q27_6	0.650	0.036	0.000
SDO	=~	Q27_7	0.696	0.030	0.000
SDO	=~	Q27_8	0.692	0.037	0.000
SDO	=~	Q27_11	0.293	0.057	0.000
RWA	=~	Q28_1	0.585	0.050	0.000
RWA	=~	Q28_3	0.493	0.065	0.000
RWA	=~	Q28_5	0.573	0.052	0.000
RWA	=~	Q28_7	0.466	0.068	0.000
RWA	=~	Q28_9	0.593	0.048	0.000
RWA	=~	Q28_11	0.493	0.064	0.000
RWA	=~	Q28_13	0.550	0.056	0.000
RWA	=~	Q28_15	0.532	0.054	0.000
Agreeableness	=~	Q26_3	0.610	0.061	0.000
Agreeableness	=~	Q26_7	0.583	0.058	0.000
Agreeableness	=~	Q26_9	0.601	0.062	0.000
Agreeableness	=~	Q26_12	0.617	0.061	0.000
Agreeableness	=~	Q26_17	0.548	0.052	0.000

With the final factor structures in hand, a new correlation matrix was generated using averaged scales with the final set of respective items. The table is shown below. Items in bold are significant at $p < 0.05$.

	AMI	ASI	SDO	RWA	Agreeableness	Gender	Mean	SD
AMI	-						3.531	0.897
ASI	**0.852**	-					3.490	0.975
SDO	**0.639**	**0.622**	-				2.763	0.865
RWA	**0.661**	**0.671**	**0.567**	-			3.234	0.744
Agreeableness	0.004	-0.038	**-0.232**	**0.114**	-		3.450	0.755
Gender	**0.136**	**0.150**	**0.245**	**0.143**	-0.093	-	0.562	0.497

The correlation matrix reveals that AMI and ASI are closely aligned with a correlation of 0.852, indicating they may be tapping into similar underlying constructs. They both also share moderate correlations with SDO and RWA—AMI with 0.639 and 0.661, ASI with 0.622 and 0.671, respectively.

In contrast, the near-zero correlations between Agreeableness and both AMI and ASI stand out. These figures, 0.004 and -0.038, imply that Agreeableness is capturing something fundamentally different. This is reinforced by its negative correlation with SDO at -0.232, while it has a low positive correlation with RWA at 0.114.

Gender shows low but consistent positive correlations with AMI, ASI, SDO, and RWA—ranging from 0.136 to 0.245.

The correlation between SDO and RWA is moderate at 0.567, suggesting they share some similarities but are also distinct in certain aspects.

Having the measurement models ready, the analysis proceeded with the structural models.

Structural Models

In the analysis, three models were compared for ASI and AMI. Starting with the ASI models, the ASI_Personality model, which does not include social-psychological paths, yielded a chi-square of $\chi^2(697, N = 331) = 2123.582$, $p < .001$, with RMSEA = 0.072, SRMR = 0.078 and $R^2 = 0.691$. In contrast, the ASI_SocialPsychology model, which excludes paths associated with personality, demonstrated poorer fit with a chi-square of $\chi^2(697, N = 331) = 2330.668$, $p < .001$, RMSEA = 0.078,, ~~and~~ SRMR = 0.147 and $R^2 = 0.031$. The ASI_Combined model, incorporating both personality and social-psychological paths, provided a similar fit to the ASI_Personality model, showing a chi-square of $\chi^2(696, N = 331) = 2123.345$, $p < .001$, RMSEA = 0.072, ~~and~~ SRMR = 0.078 and $R^2 = 0.691$. The

ASI_Combined model showed no significantly better fit to the data compared to both the ASI_Personality model, $\Delta\chi^2(1, N = 331) = 0.237$, p ~~< .001~~ = 0.597, ~~and~~ but significantly better than the ASI_SocialPsychology model, $\Delta\chi^2(1, N = 331) = 207.323$, $p < .001$. This indicates that incorporating elements from both domains improves model fit in relation to the social psychology model~~.~~. AIC (Akaike Information Criterion) for Personality was 38,536 and for Social Psychology was 38,743 suggesting a slightly better fit for the latter model.

Turning attention to the AMI models, the AMI_Personality model had a chi-square of $\chi^2(855, N = 331) = 2768.878$, $p < .001$, RMSEA = 0.076, and SRMR = 0.088. Explained Variance of AMI (R^2) was 70.9% ($R^2 = 0.709$). On the other hand, the AMI_SocialPsychology model showed a chi-square of $\chi^2(855, N = 331) = 2959.511$, $p < .001$, RMSEA = 0.080, ~~and~~ SRMR = 0.143 and $R^2 = 0.022$ for AMI. The AMI_Combined model offered the best fit among AMI models, with a chi-square of $\chi^2(854, N = 331) = 2768.619$, $p < .001$, RMSEA = 0.076, ~~and~~ SRMR = 0.088 and $R^2 = 0.711$. Notably, the AMI_Combined model exhibited an almost negligible and non-significant better fit to the data than the AMI_Personality model, $\Delta\chi^2(1, N = 331) = 0.259$, p ~~< .001~~ = 0.601, but more substantially better than the AMI_SocialPsychology model, $\Delta\chi^2(1, N = 331) = 190.892$, $p < .001$. Moreover, the AMI_Personality model itself outperformed the AMI_SocialPsychology model, $\Delta\chi^2(1, N = 331) = 190.633$~~, p < .001~~. AIC (Akaike Information Criterion) for Personality was 42,999 and for Social Psychology was 43,189 suggesting a slightly better fit for the latter model.

When comparing the combined versions of AMI and ASI models, the AMI model shows a significantly better fit, $\Delta\chi^2(158, N = 331) = 645.274$, $p < .001$.

The figures below show the diagrams of all tested models.

Figure 1 - ASI Model Combined

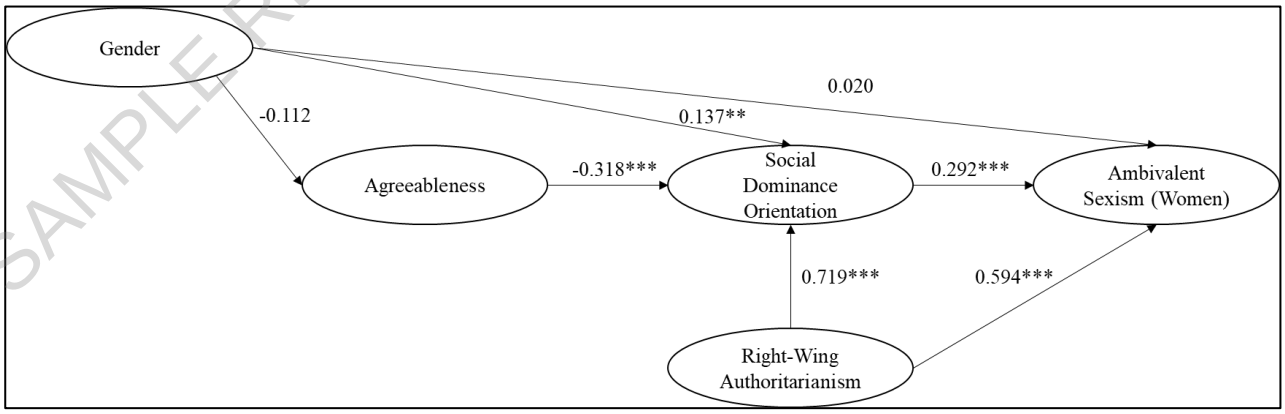

Figure 2 - ASI Model Personality

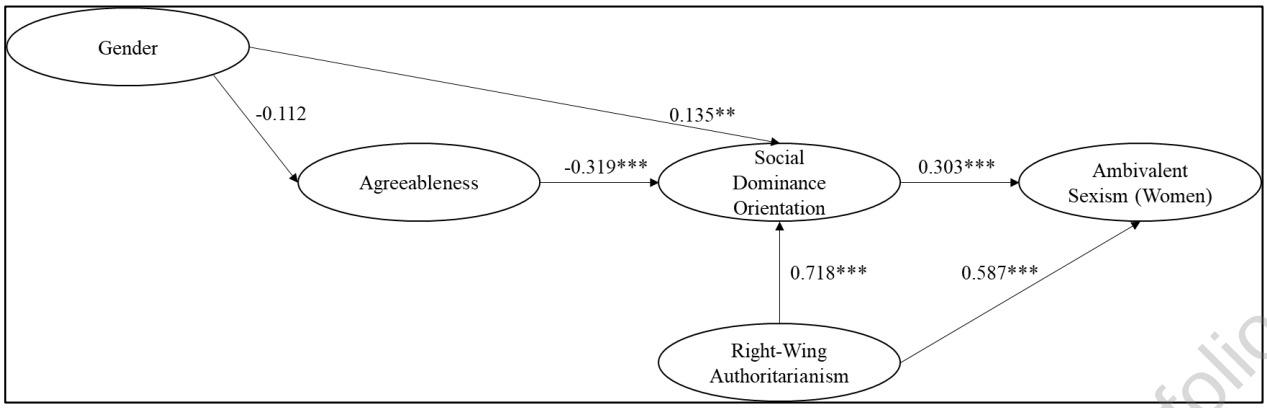

Figure 3 - ASI Model Social Psychology

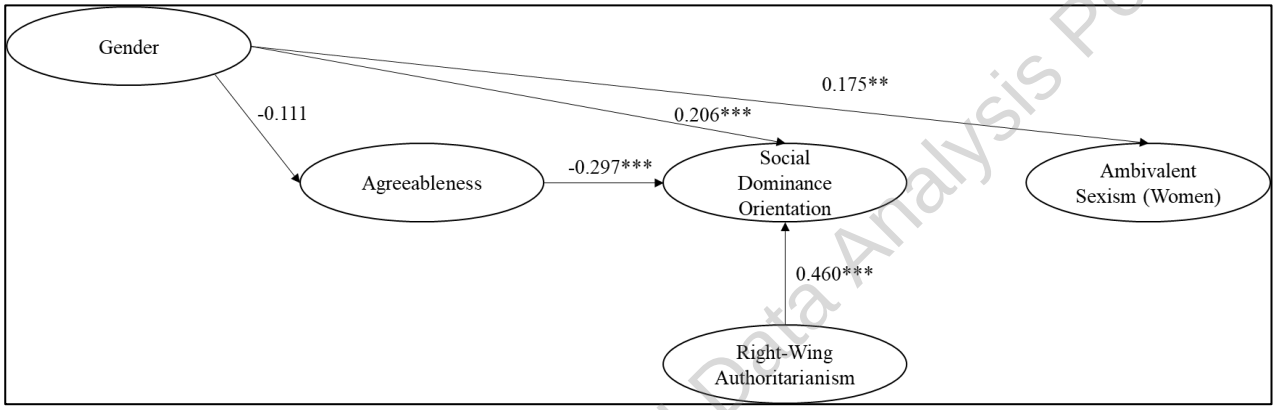

Figure 4- AMI Model Combined

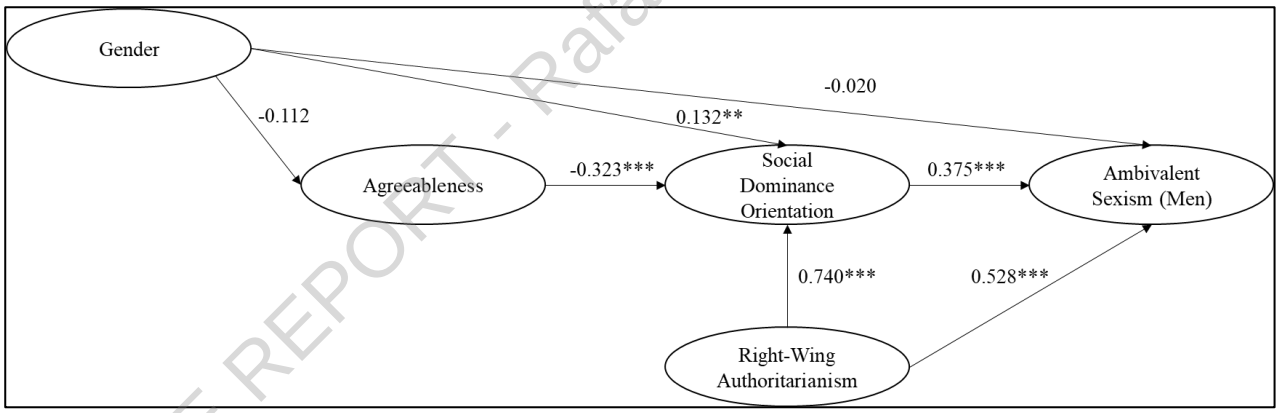

Figure 5 - AMI Model Personality

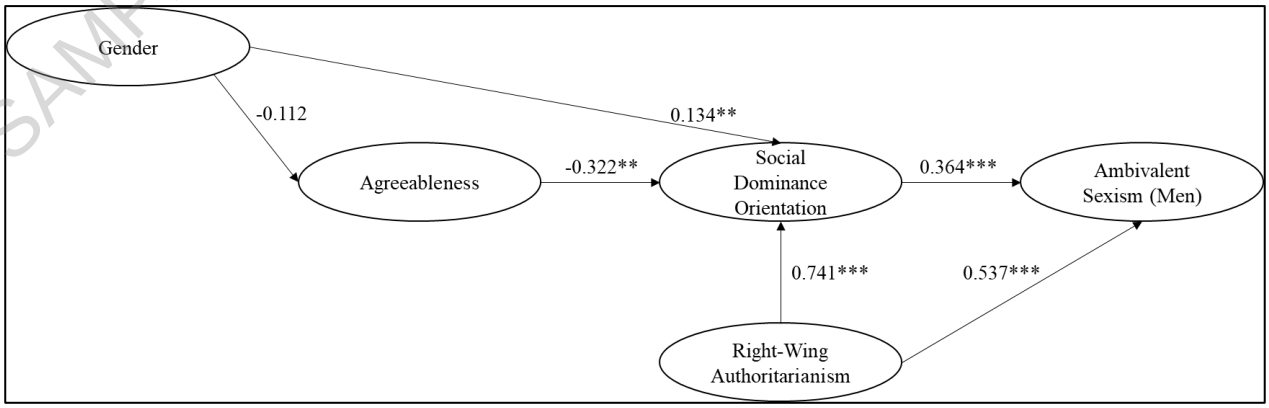

Figure 6 - AMI Model Social Psychology