Formula for final model

*PhysicalActivity* = β0 + β1\**age* + β2\**PokemonGo\_AppUsage* + β3\**PokemonGo\_Relate.Behaviour* + β4\*Gender\*education + β5\**social\_sharing*\* *PokemonGo\_Relate.Behaviour +*β6\**age*\**Attitude* + ϵ

* β0 is the intercept of the model
* β1 represents the estimate of variable *age*
* β2 represents the estimates of variable *PokemonGo\_AppUsage*
* β3 represents the estimates of variable *PokemonGo\_Relate.Behaviour*
* β4 represents the estimates of interaction term of variables Gender (representing female and male by “1” & “2” respectively) and education (represent the education level)
* β5 represents the estimates of interaction term of variables *social\_sharing* and *PokemonGo\_Relate.Behaviour*
* β6 represents the estimates of interaction term of variables *age* and *Attitude*
* ϵ represented the error terms of the model, with an assumption of normal distribution

*PhysicalActivity* = β0 + β1\**age* + β2\**PokemonGo\_AppUsage* + β3\*Gender\*education +β4\**age*\**Attitude* + ϵ

* β0 is the intercept of the model
* β1 represents the estimate of variable *age*
* β2 represents the estimates of variable *PokemonGo\_AppUsage*
* β3 represents the estimates of interaction term of variables Gender (representing female and male by “1” & “2” respectively) and education (represent the education level)
* β4 represents the estimates of interaction term of variables *age* and *Attitude*
* ϵ represented the error terms of the model, with an assumption of normal distribution

*PhysicalActivity* = β0+β1\**age* + β2\**education* + β3\**Gender* + β4\**Attitude* + β5\**PokemonGo\_AppUsage* + β6\**PokemonGo\_Relate.Behaviour* + β7\**social\_sharing* + α1\**age*^2 +α2\**Attitude*^2 + α3\**PokemonGo\_Relate.Behaviour*^2 + γ1\**age*\**education* + γ2\**age*\**Gender* + γ3\**age*\**Attitude*+ γ4\**age*\**PokemonGo\_AppUsage* + γ5\**age*\**social\_sharing*+ γ6\**age*\**PokemonGo\_Relate.Behaviour* + γ7\**education*\*Gender+ γ8\**education*\**Attitude* + γ9\**education*\**PokemonGo\_AppUsage*+ γ10\**education*\**social\_sharing*+ γ11\**education*\**PokemonGo\_Relate.Behaviour* + γ12\**Gender*\**Attitude*+ γ13\**Gender*\**PokemonGo\_AppUsage*+ γ14\**Gender*\**social\_sharing*+ γ15\**Gender*\**PokemonGo\_Relate.Behaviour* + γ16\**Attitude*\**PokemonGo\_AppUsage*+ γ17\**Attitude*\**social\_sharing*+ γ18\**Attitude*\**PokemonGo\_Relate.Behaviour* + γ19\**PokemonGo\_AppUsage*\**social\_sharing* + γ20\**PokemonGo\_AppUsage*\**PokemonGo\_Relate.Behaviour*+ γ21\**social\_sharing*\**PokemonGo\_Relate.Behaviour* + ϵ

* β0 is the intercept of the model
* β1 represents the estimate of variable *age*
* β2 represents the estimate of variable *education*, representing different education level by discrete number
* β3 represents the estimate of female and male participants
* β4 represents the estimate of variable *Attitude*
* β5 represents the estimates of variable *PokemonGo\_AppUsage*
* β6 represents the estimates of variable *PokemonGo\_Relate.Behaviour*
* β7 represents the estimates of variable *social\_sharing*
* α1 represents the estimates of interaction term of the *age* itself
* α2 represents the estimates of interaction term of the *Attitude* itself
* α3 represents the estimates of interaction term of the variable *PokemonGo\_Relate.Behaviour* itself
* γ1 represents the estimates of interaction term of variables *age* and *education* (representing different education level by discrete number)
* γ2 represents the estimates of interaction term of variables *age* and *Gender* (representing female and male participants)
* γ3 represents the estimates of interaction term of variables *age* and *Attitude*
* γ4 represents the estimates of interaction term of variables *age* and *PokemonGo\_AppUsage*
* γ5 represents the estimates of interaction term of variables *age* and *social\_sharing*
* γ6 represents the estimates of interaction term of variables *age* and *PokemonGo\_Relate.Behaviour*
* γ7 represents the estimates of interaction term of variables *education* (representing different education level by discrete number)and *Gender* (representing female and male participants)
* γ8 represents the estimates of interaction term of variables *education* (representing different education level by discrete number)and *Attitude*
* γ9 represents the estimates of interaction term of variables *education* (representing different education level by discrete number)and *PokemonGo\_AppUsage*
* γ10 represents the estimates of interaction term of variables *education* (representing different education level by discrete number)and *social\_sharing*
* γ11 represents the estimates of interaction term of variables *education* (representing different education level by discrete number)and *PokemonGo\_Relate.Behaviour*
* γ12 represents the estimates of interaction term of variables *Gender* (representing female and male participants) and *Attitude*
* γ13 represents the estimates of interaction term of variables *Gender* (representing female and male participants) and *PokemonGo\_AppUsage*
* γ14 represents the estimates of interaction term of variables *Gender* (representing female and male participants) and *social\_sharing*
* γ15 represents the estimates of interaction term of variables *Gender* (representing female and male participants) and *PokemonGo\_Relate.Behaviour*
* γ16 represents the estimates of interaction term of variables *Attitude* and *PokemonGo\_AppUsage*
* γ17 represents the estimates of interaction term of variables *Attitude* and *education*
* γ18 represents the estimates of interaction term of variables *Attitude* and *PokemonGo\_Relate.Behaviour*
* γ19 represents the estimates of interaction term of variables *PokemonGo\_AppUsage* and *social\_sharing*
* γ20 represents the estimates of interaction term of variables *PokemonGo\_AppUsage* and *PokemonGo\_Relate.Behaviour*
* γ21 represents the estimates of interaction term of variables *social\_sharing* and *PokemonGo\_Relate.Behaviour*
* ϵ represented the error terms of the model, with an assumption of normal distribution

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Coefficients | Estimate | Std. Error | t value | Pr(>|t|) |
| (Intercept) | 2.579123 | 0.195938 | 13.163 | < 2e-16 |
| age | -0.073988 | 0.014109 | -5.244 | 1.93e-07 |
| PokemonGo\_AppUsage | -0.162347 | 0.029188 | -5.562 | 3.44e-08 |
| PokemonGo\_Relate.Behaviour | 0.759422 | 0.092167 | 8.240 | 5.54e-16 |
| education \* Gender | 0.038794 | 0.009958 | 3.896 | 0.000105 |
| age \* Attitude | 0.011734 | 0.002523 | 4.650 | 3.77e-06 |
| social\_sharing \* PokemonGo\_Relate.Behaviour | -0.023376 | 0.013111 | -1.783 | 0.074902 |

Table 3.8: Summary of Final Model