| Endpoint | Potential confounders | Factors | Coefficients | SE | P | Adjusted P | R-Squared | AdP<0.05 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| alt\_cat1 | age\_at\_enrollment | age\_at\_enrollment | -0.026233874679662056578 | 0.0163318262 | 0.10820717252178910228 | 1.000000000000000000 |  |  |
| alt\_cat1 | bmi | bmi | 0.017865437401708639947 | 0.0224414331 | 0.42597877004237133525 | 1.000000000000000000 |  |  |
| alt\_cat1 | trig\_mg\_d\_l | trig\_mg\_d\_l | 0.005462243962190295628 | 0.0016636442 | 0.00102599179459400580 | 0.056429548702670321 |  |  |
| alt\_cat1 | source | sourceDUKE | -0.225169894459436165102 | 0.3795801668 | 0.55304213064261009691 | 1.000000000000000000 | 0.0747085934 |  |
| alt\_cat1 | source | sourceNCSU | -1.675161075970776014543 | 0.4195293717 | 0.00006525549840920351 | 0.003589052412506193 | 0.0747085934 | \* |
| alt\_cat1 | source | sourceUNC | -0.424441009567171012584 | 0.6889374885 | 0.53784133652336096887 | 1.000000000000000000 | 0.0747085934 |  |
| alt\_cat1 | sex | sexMale | -0.550647100973884140451 | 0.3532883987 | 0.11908317117429043086 | 1.000000000000000000 | 0.0091600929 |  |
| alt\_cat1 | race\_eth\_label | race\_eth\_labelNHB | -1.769286611643421158746 | 0.7380279235 | 0.01651564532700146304 | 0.908360492985080481 | 0.0401226494 |  |
| alt\_cat1 | race\_eth\_label | race\_eth\_labelNHO | -1.466337068788595487945 | 1.1875408668 | 0.21691698298393155553 | 1.000000000000000000 | 0.0401226494 |  |
| alt\_cat1 | race\_eth\_label | race\_eth\_labelNHW | -0.441832752279043727839 | 0.6058576500 | 0.46583758560907834179 | 1.000000000000000000 | 0.0401226494 |  |
| alt\_cat1 | race\_eth\_label | race\_eth\_labelUnknown/Not Reported | -0.747214401830225805057 | 0.8481145239 | 0.37830154255656661677 | 1.000000000000000000 | 0.0401226494 |  |
| alt\_cat1 | race\_final\_label | race\_final\_labelAmerican Indian | 1.456911928333845418493 | 1.4248059735 | 0.30652843589732298168 | 1.000000000000000000 | 0.0700048442 |  |
| alt\_cat1 | race\_final\_label | race\_final\_labelAmerican Indian/Alaskan Native | -16.109156558009949833377 | 2,284.1017839236 | 0.99437278109021021155 | 1.000000000000000000 | 0.0700048442 |  |
| alt\_cat1 | race\_final\_label | race\_final\_labelAsian | 0.763764747773893581950 | 1.2369608167 | 0.53693619648689894230 | 1.000000000000000000 | 0.0700048442 |  |
| alt\_cat1 | race\_final\_label | race\_final\_labelAsian/Pacific Islander | -16.109156558025318872751 | 1,615.1038649906 | 0.99204197669526050785 | 1.000000000000000000 | 0.0700048442 |  |
| alt\_cat1 | race\_final\_label | race\_final\_labelBlack | -1.487527050832599950780 | 0.4905082852 | 0.00242437710260316481 | 0.133340740643174055 | 0.0700048442 |  |
| alt\_cat1 | race\_final\_label | race\_final\_labelMore than one race | -16.109156558015797600092 | 3,956.1803317950 | 0.99675110568558999979 | 1.000000000000000000 | 0.0700048442 |  |
| alt\_cat1 | race\_final\_label | race\_final\_labelOther | -0.845673164660203480203 | 1.0630484759 | 0.42631280953424305347 | 1.000000000000000000 | 0.0700048442 |  |
| alt\_cat1 | race\_final\_label | race\_final\_labelUnknown/Not Reported | -16.109156558024473326896 | 1,615.1038649912 | 0.99204197669526417158 | 1.000000000000000000 | 0.0700048442 |  |
| alt\_cat1 | ethnicity | ethnicityNot Hispanic | -0.758429472651821923179 | 0.6007160013 | 0.20675364906046439506 | 1.000000000000000000 | 0.0050141511 |  |
| alt\_cat1 | ethnicity | ethnicityUnknown/Not Reported | -0.747214401832278607429 | 0.8481139232 | 0.37830120480750023537 | 1.000000000000000000 | 0.0050141511 |  |
| alt\_cat1 | rural | ruralLiving in rural area | 1.285823830644600818118 | 0.4283413529 | 0.00268329260097857148 | 0.147581093053821444 | 0.0284067926 |  |
| alt\_cat1 | rural | ruralUnknown/Not Reported | 0.062048399037798213085 | 0.5127251042 | 0.90367765490709073273 | 1.000000000000000000 | 0.0284067926 |  |
| alt\_cat1 | smoking | smokingSmoke or use vape | 0.227658231668759675204 | 0.4898421592 | 0.64210452026574293960 | 1.000000000000000000 | 0.0108478368 |  |
| alt\_cat1 | smoking | smokingUnknown/Not Reported | -0.597416406111424214131 | 0.3963816914 | 0.13176591615860464013 | 1.000000000000000000 | 0.0108478368 |  |
| alt\_cat1 | sq\_drink\_alcohol | sq\_drink\_alcoholNo, former drinker (stopped) | -0.118263920493732951900 | 0.4476291429 | 0.79162529303975337491 | 1.000000000000000000 | 0.0105007490 |  |
| alt\_cat1 | sq\_drink\_alcohol | sq\_drink\_alcoholUnknown/Not Reported | -0.713226337643590113657 | 0.4637859070 | 0.12408889102599969523 | 1.000000000000000000 | 0.0105007490 |  |
| alt\_cat1 | sq\_drink\_alcohol | sq\_drink\_alcoholYes, current drinker | -0.126562723308429825320 | 0.4082397926 | 0.75654533230683129741 | 1.000000000000000000 | 0.0105007490 |  |
| alt\_cat1 | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_day1-2 alcoholic drinks per day | -1.098612287703129686278 | 1.0755551545 | 0.30704724158597634931 | 1.000000000000000000 | 0.0206324336 |  |
| alt\_cat1 | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_day3-4 alcoholic drinks per day | 1.734601055388105717014 | 0.8744746322 | 0.04730131997551788314 | 1.000000000000000000 | 0.0206324336 |  |
| alt\_cat1 | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_dayUnknown/Not Reported | -0.125477657817427923348 | 0.3647728432 | 0.73085494565158404257 | 1.000000000000000000 | 0.0206324336 |  |
| alt\_cat1 | sq\_self\_hep\_b | sq\_self\_hep\_bUnknown/Not Reported | -0.824894451390963179271 | 0.3897119082 | 0.03428722246878547486 | 1.000000000000000000 | 0.0365968656 |  |
| alt\_cat1 | sq\_self\_hep\_b | sq\_self\_hep\_bYes | -16.023839323614339491542 | 959.5146844266 | 0.98667599364406999296 | 1.000000000000000000 | 0.0365968656 |  |
| alt\_cat1 | sq\_self\_hep\_c | sq\_self\_hep\_cUnknown/Not Reported | -0.778466945334304716297 | 0.3906013754 | 0.04626189445067111633 | 1.000000000000000000 | 0.0200437352 |  |
| alt\_cat1 | sq\_self\_hep\_c | sq\_self\_hep\_cYes | -1.194403352979448440507 | 1.0456607375 | 0.25335116097387549994 | 1.000000000000000000 | 0.0200437352 |  |
| alt\_cat1 | supp\_meds\_tylenol | supp\_meds\_tylenolUnknown/Not Reported | 14.784565434205914513655 | 979.6100399033 | 0.98795854655604287142 | 1.000000000000000000 | 0.0097532033 |  |
| alt\_cat1 | supp\_meds\_tylenol | supp\_meds\_tylenolYes | -0.000000019197709004373 | 1,696.7343417548 | 0.99999999999097233250 | 1.000000000000000000 | 0.0097532033 |  |
| alt\_cat1 | supp\_meds\_steroids | supp\_meds\_steroidsUnknown/Not Reported | 14.781134914209376418626 | 906.9426658914 | 0.98699684367605378110 | 1.000000000000000000 | 0.0086558136 |  |
| alt\_cat1 | supp\_meds\_steroids | supp\_meds\_steroidsYes | -0.000000004106911744103 | 2,565.2212059756 | 0.99999999999872257739 | 1.000000000000000000 | 0.0086558136 |  |
| alt\_cat1 | sq\_water\_well | sq\_water\_wellUnknown/Not Reported | -0.226773318542274227028 | 0.3545168876 | 0.52238807833461842201 | 1.000000000000000000 | 0.0104071509 |  |
| alt\_cat1 | sq\_water\_well | sq\_water\_wellYes | 0.536366233015758031577 | 0.4078972929 | 0.18852531644405548517 | 1.000000000000000000 | 0.0104071509 |  |
| alt\_cat1 | sq\_water\_tap\_unfiltered | sq\_water\_tap\_unfilteredUnknown/Not Reported | -0.395803196000223123097 | 0.4307974185 | 0.35821655289809778422 | 1.000000000000000000 | 0.0042513118 |  |
| alt\_cat1 | sq\_water\_tap\_unfiltered | sq\_water\_tap\_unfilteredYes | -0.038318864302135616229 | 0.3848945265 | 0.92069619834665983316 | 1.000000000000000000 | 0.0042513118 |  |
| alt\_cat1 | sq\_water\_house\_filtration | sq\_water\_house\_filtrationUnknown/Not Reported | -0.564494472666662305826 | 0.3359615225 | 0.09291150720934608642 | 1.000000000000000000 | 0.0179219253 |  |
| alt\_cat1 | sq\_water\_house\_filtration | sq\_water\_house\_filtrationYes | -1.176573830039859380747 | 0.7558657994 | 0.11956764409879121203 | 1.000000000000000000 | 0.0179219253 |  |
| alt\_cat1 | sq\_water\_faucet\_filter | sq\_water\_faucet\_filterUnknown/Not Reported | -0.275649045983580032182 | 0.3851966286 | 0.47423462386710679706 | 1.000000000000000000 | 0.0094710048 |  |
| alt\_cat1 | sq\_water\_faucet\_filter | sq\_water\_faucet\_filterYes | 0.351149655484573663955 | 0.3694201022 | 0.34183646615448831652 | 1.000000000000000000 | 0.0094710048 |  |
| alt\_cat1 | sq\_water\_charcoal\_filter | sq\_water\_charcoal\_filterUnknown/Not Reported | -0.634419735967569731194 | 0.3486561617 | 0.06881776314238814696 | 1.000000000000000000 | 0.0129747807 |  |
| alt\_cat1 | sq\_water\_charcoal\_filter | sq\_water\_charcoal\_filterYes | -0.461886194561395013736 | 0.4809744165 | 0.33689748983723810660 | 1.000000000000000000 | 0.0129747807 |  |
| alt\_cat1 | sq\_water\_bottled | sq\_water\_bottledUnknown/Not Reported | 0.003081666528221338464 | 0.4499101357 | 0.99453491992518650022 | 1.000000000000000000 | 0.0045315654 |  |
| alt\_cat1 | sq\_water\_bottled | sq\_water\_bottledYes | 0.351851430862919478670 | 0.4175741123 | 0.39944752346431072754 | 1.000000000000000000 | 0.0045315654 |  |
| alt\_cat1 | sq\_water\_none | sq\_water\_noneUnknown/Not Reported | -0.535366732682104440322 | 0.3334379656 | 0.10836265946871581622 | 1.000000000000000000 | 0.0124914317 |  |
| alt\_cat1 | sq\_water\_none | sq\_water\_noneYes | -1.054160526072935866182 | 1.0525853045 | 0.31658681865900639707 | 1.000000000000000000 | 0.0124914317 |  |
| alt\_cat1 | sq\_water\_other\_type | sq\_water\_other\_typeUnknown/Not Reported | -0.487036755187071901396 | 0.3455664808 | 0.15872089466911579181 | 1.000000000000000000 | 0.0088908279 |  |
| alt\_cat1 | sq\_water\_other\_type | sq\_water\_other\_typeYes | 0.179793110440607556422 | 0.5339634462 | 0.73633230723261533512 | 1.000000000000000000 | 0.0088908279 |  |
| alt\_cat2 | age\_at\_enrollment | age\_at\_enrollment | -0.039637698075085388283 | 0.0213090412 | 0.06286639712768915533 | 1.000000000000000000 |  |  |
| alt\_cat2 | bmi | bmi | 0.030015359275567334713 | 0.0269864590 | 0.26603592792896813002 | 1.000000000000000000 |  |  |
| alt\_cat2 | trig\_mg\_d\_l | trig\_mg\_d\_l | 0.004192856265105312716 | 0.0020253225 | 0.03843206732819921118 | 1.000000000000000000 |  |  |
| alt\_cat2 | source | sourceDUKE | -0.403754243704545656701 | 0.4727871508 | 0.39311200123779493909 | 1.000000000000000000 | 0.0717079376 |  |
| alt\_cat2 | source | sourceNCSU | -1.825045446845220631360 | 0.5519684662 | 0.00094492742365816901 | 0.051971008301199294 | 0.0717079376 |  |
| alt\_cat2 | source | sourceUNC | -0.325422400434626946097 | 0.8157111102 | 0.68993505709170510620 | 1.000000000000000000 | 0.0717079376 |  |
| alt\_cat2 | sex | sexMale | 0.063591102781202585303 | 0.4115649570 | 0.87720724146909179186 | 1.000000000000000000 | 0.0001218133 |  |
| alt\_cat2 | race\_eth\_label | race\_eth\_labelNHB | -1.934860312866998333092 | 0.8687348478 | 0.02593282898961341357 | 1.000000000000000000 | 0.0334958008 |  |
| alt\_cat2 | race\_eth\_label | race\_eth\_labelNHO | -1.098612288668103342815 | 1.2194996872 | 0.36765674359627181778 | 1.000000000000000000 | 0.0334958008 |  |
| alt\_cat2 | race\_eth\_label | race\_eth\_labelNHW | -0.869037847023603982066 | 0.6864315770 | 0.20550501346804816993 | 1.000000000000000000 | 0.0334958008 |  |
| alt\_cat2 | race\_eth\_label | race\_eth\_labelUnknown/Not Reported | -0.379489621704902135857 | 0.8923123458 | 0.67062683113586663008 | 1.000000000000000000 | 0.0334958008 |  |
| alt\_cat2 | race\_final\_label | race\_final\_labelAmerican Indian | 2.132363943134173212002 | 1.4313046147 | 0.13627566828779175134 | 1.000000000000000000 | 0.0754863394 |  |
| alt\_cat2 | race\_final\_label | race\_final\_labelAmerican Indian/Alaskan Native | -16.433704566733137397705 | 3,765.8471594257 | 0.99651813868733907231 | 1.000000000000000000 | 0.0754863394 |  |
| alt\_cat2 | race\_final\_label | race\_final\_labelAsian | 1.439216762574229369065 | 1.2444407981 | 0.24746980789577688320 | 1.000000000000000000 | 0.0754863394 |  |
| alt\_cat2 | race\_final\_label | race\_final\_labelAsian/Pacific Islander | -16.433704566748637887486 | 2,662.8560679096 | 0.99507592014631562893 | 1.000000000000000000 | 0.0754863394 |  |
| alt\_cat2 | race\_final\_label | race\_final\_labelBlack | -1.343734746701098714539 | 0.6263190175 | 0.03191706225657969798 | 1.000000000000000000 | 0.0754863394 |  |
| alt\_cat2 | race\_final\_label | race\_final\_labelMore than one race | -16.433704566719676165576 | 6,522.6386061632 | 0.99798974217797375985 | 1.000000000000000000 | 0.0754863394 |  |
| alt\_cat2 | race\_final\_label | race\_final\_labelOther | -16.433704566729861795693 | 1,966.6495475926 | 0.99333279964755605285 | 1.000000000000000000 | 0.0754863394 |  |
| alt\_cat2 | race\_final\_label | race\_final\_labelUnknown/Not Reported | -16.433704566733613461338 | 2,662.8560678977 | 0.99507592014629808741 | 1.000000000000000000 | 0.0754863394 |  |
| alt\_cat2 | ethnicity | ethnicityNot Hispanic | -1.109047165954573088698 | 0.6776215793 | 0.10169812765956710854 | 1.000000000000000000 | 0.0156579527 |  |
| alt\_cat2 | ethnicity | ethnicityUnknown/Not Reported | -0.379489621704898472121 | 0.8923123458 | 0.67062683113582099992 | 1.000000000000000000 | 0.0156579527 |  |
| alt\_cat2 | rural | ruralLiving in rural area | 0.902867711540602968512 | 0.5398888514 | 0.09446095036773231868 | 1.000000000000000000 | 0.0153113724 |  |
| alt\_cat2 | rural | ruralUnknown/Not Reported | -0.405465104222659467048 | 0.7605675381 | 0.59395839820663642872 | 1.000000000000000000 | 0.0153113724 |  |
| alt\_cat2 | smoking | smokingSmoke or use vape | -0.024938948347251486959 | 0.6484486296 | 0.96932139778648473971 | 1.000000000000000000 | 0.0166470401 |  |
| alt\_cat2 | smoking | smokingUnknown/Not Reported | -0.913255712004269804005 | 0.5596315492 | 0.10270319443516763569 | 1.000000000000000000 | 0.0166470401 |  |
| alt\_cat2 | sq\_drink\_alcohol | sq\_drink\_alcoholNo, former drinker (stopped) | 0.075223421237585616494 | 0.5619893469 | 0.89351957445365570720 | 1.000000000000000000 | 0.0167343203 |  |
| alt\_cat2 | sq\_drink\_alcohol | sq\_drink\_alcoholUnknown/Not Reported | -0.868803949433448408080 | 0.6464269532 | 0.17894532328660461840 | 1.000000000000000000 | 0.0167343203 |  |
| alt\_cat2 | sq\_drink\_alcohol | sq\_drink\_alcoholYes, current drinker | 0.047486666265983350221 | 0.5176757485 | 0.92691214713977665429 | 1.000000000000000000 | 0.0167343203 |  |
| alt\_cat2 | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_day1-2 alcoholic drinks per day | -15.221519194264212515577 | 932.4807297930 | 0.98697616430537138399 | 1.000000000000000000 | 0.0540771624 |  |
| alt\_cat2 | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_day3-4 alcoholic drinks per day | 2.344549292093085046673 | 0.9073160638 | 0.00976478813532765874 | 0.537063347443021200 | 0.0540771624 |  |
| alt\_cat2 | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_dayUnknown/Not Reported | -0.190028967492161110497 | 0.4653134587 | 0.68298799846096425181 | 1.000000000000000000 | 0.0540771624 |  |
| alt\_cat2 | sq\_self\_hep\_b | sq\_self\_hep\_bUnknown/Not Reported | -1.093674007027523042979 | 0.5536187905 | 0.04821141689857211948 | 1.000000000000000000 | 0.0398287675 |  |
| alt\_cat2 | sq\_self\_hep\_b | sq\_self\_hep\_bYes | -15.430916337664656978745 | 959.5146928920 | 0.98716897270832748568 | 1.000000000000000000 | 0.0398287675 |  |
| alt\_cat2 | sq\_self\_hep\_c | sq\_self\_hep\_cUnknown/Not Reported | -1.078809661371938455332 | 0.5536863981 | 0.05136559029663342879 | 1.000000000000000000 | 0.0390855330 |  |
| alt\_cat2 | sq\_self\_hep\_c | sq\_self\_hep\_cYes | -15.426002322869427629826 | 959.5146928803 | 0.98717305842956548645 | 1.000000000000000000 | 0.0390855330 |  |
| alt\_cat2 | supp\_meds\_tylenol | supp\_meds\_tylenolUnknown/Not Reported | 15.155269754569285822754 | 1,615.1038609443 | 0.99251318841126523473 | 1.000000000000000000 | 0.0078266263 |  |
| alt\_cat2 | supp\_meds\_tylenol | supp\_meds\_tylenolYes | -0.000000054132891136543 | 2,797.4419336078 | 0.99999999998456023942 | 1.000000000000000000 | 0.0078266263 |  |
| alt\_cat2 | supp\_meds\_steroids | supp\_meds\_steroidsUnknown/Not Reported | 14.152069757207858202719 | 906.9426777446 | 0.98755019471385230290 | 1.000000000000000000 | 0.0069463848 |  |
| alt\_cat2 | supp\_meds\_steroids | supp\_meds\_steroidsYes | 0.000000015067030440910 | 2,565.2212072417 | 0.99999999999531352657 | 1.000000000000000000 | 0.0069463848 |  |
| alt\_cat2 | sq\_water\_well | sq\_water\_wellUnknown/Not Reported | -0.275351459811247811782 | 0.4653182558 | 0.55401889897571010568 | 1.000000000000000000 | 0.0135439777 |  |
| alt\_cat2 | sq\_water\_well | sq\_water\_wellYes | 0.627209079067505892446 | 0.4990424514 | 0.20881697491010409173 | 1.000000000000000000 | 0.0135439777 |  |
| alt\_cat2 | sq\_water\_tap\_unfiltered | sq\_water\_tap\_unfilteredUnknown/Not Reported | -0.288701960152827230566 | 0.5770449246 | 0.61685606482927246574 | 1.000000000000000000 | 0.0058951753 |  |
| alt\_cat2 | sq\_water\_tap\_unfiltered | sq\_water\_tap\_unfilteredYes | 0.208958916321907217650 | 0.5046396332 | 0.67881880342852296550 | 1.000000000000000000 | 0.0058951753 |  |
| alt\_cat2 | sq\_water\_house\_filtration | sq\_water\_house\_filtrationUnknown/Not Reported | -0.700929321002004557251 | 0.4347435313 | 0.10690051291836069614 | 1.000000000000000000 | 0.0431851951 |  |
| alt\_cat2 | sq\_water\_house\_filtration | sq\_water\_house\_filtrationYes | -16.486626968177940710802 | 1,153.0505211490 | 0.98859202032011728178 | 1.000000000000000000 | 0.0431851951 |  |
| alt\_cat2 | sq\_water\_faucet\_filter | sq\_water\_faucet\_filterUnknown/Not Reported | -0.177375132746212388346 | 0.5031355249 | 0.72443372101136205288 | 1.000000000000000000 | 0.0102874640 |  |
| alt\_cat2 | sq\_water\_faucet\_filter | sq\_water\_faucet\_filterYes | 0.482521847600486109009 | 0.4716140196 | 0.30624699002027083727 | 1.000000000000000000 | 0.0102874640 |  |
| alt\_cat2 | sq\_water\_charcoal\_filter | sq\_water\_charcoal\_filterUnknown/Not Reported | -0.686226737385032037331 | 0.4418839220 | 0.12043340377232042426 | 1.000000000000000000 | 0.0208718645 |  |
| alt\_cat2 | sq\_water\_charcoal\_filter | sq\_water\_charcoal\_filterYes | -1.091691694301099468944 | 0.7635512312 | 0.15278715918519064632 | 1.000000000000000000 | 0.0208718645 |  |
| alt\_cat2 | sq\_water\_bottled | sq\_water\_bottledUnknown/Not Reported | -0.237742350693530890560 | 0.5613082604 | 0.67189371859359781070 | 1.000000000000000000 | 0.0035293487 |  |
| alt\_cat2 | sq\_water\_bottled | sq\_water\_bottledYes | 0.139551880405942074770 | 0.5099484258 | 0.78434683299823926284 | 1.000000000000000000 | 0.0035293487 |  |
| alt\_cat2 | sq\_water\_none | sq\_water\_noneUnknown/Not Reported | -0.583013385575667841820 | 0.4369409506 | 0.18210325201362559389 | 1.000000000000000000 | 0.0098955338 |  |
| alt\_cat2 | sq\_water\_none | sq\_water\_noneYes | -0.418710334833850172931 | 1.0629052056 | 0.69363266016948055270 | 1.000000000000000000 | 0.0098955338 |  |
| alt\_cat2 | sq\_water\_other\_type | sq\_water\_other\_typeUnknown/Not Reported | -0.523371179982396017571 | 0.4680110377 | 0.26344396228205851918 | 1.000000000000000000 | 0.0241089595 |  |
| alt\_cat2 | sq\_water\_other\_type | sq\_water\_other\_typeYes | 0.893301213649423497820 | 0.5601504100 | 0.11076761402076108765 | 1.000000000000000000 | 0.0241089595 |  |
| ast\_cat1 | age\_at\_enrollment | age\_at\_enrollment | 0.005268246471325298969 | 0.0118245751 | 0.65593412544620544047 | 1.000000000000000000 |  |  |
| ast\_cat1 | bmi | bmi | -0.014535779609609108393 | 0.0163297636 | 0.37339059013982017765 | 1.000000000000000000 |  |  |
| ast\_cat1 | trig\_mg\_d\_l | trig\_mg\_d\_l | 0.005305204138841340331 | 0.0016769522 | 0.00155831413826267961 | 0.085707277604447379 |  |  |
| ast\_cat1 | source | sourceDUKE | 0.436236766777397866335 | 0.3783220563 | 0.24887628053965479835 | 1.000000000000000000 | 0.0569731749 |  |
| ast\_cat1 | source | sourceNCSU | -0.946143695021259834022 | 0.2976649668 | 0.00148012460996478569 | 0.081406853548063207 | 0.0569731749 |  |
| ast\_cat1 | source | sourceUNC | -0.105360515656705927556 | 0.5906006373 | 0.85841235696552686818 | 1.000000000000000000 | 0.0569731749 |  |
| ast\_cat1 | sex | sexMale | -0.451200502282345261573 | 0.2318695376 | 0.05166386741406917699 | 1.000000000000000000 | 0.0082430317 |  |
| ast\_cat1 | race\_eth\_label | race\_eth\_labelNHB | -1.292768303106116345447 | 0.6137997443 | 0.03518934818795917130 | 1.000000000000000000 | 0.0575800323 |  |
| ast\_cat1 | race\_eth\_label | race\_eth\_labelNHO | -1.386294361116948481438 | 0.7905690517 | 0.07950938011930128169 | 1.000000000000000000 | 0.0575800323 |  |
| ast\_cat1 | race\_eth\_label | race\_eth\_labelNHW | -0.076961041136060961976 | 0.5987636452 | 0.89772698168271780617 | 1.000000000000000000 | 0.0575800323 |  |
| ast\_cat1 | race\_eth\_label | race\_eth\_labelUnknown/Not Reported | -0.916290731871206909354 | 0.7187948890 | 0.20239432125046510902 | 1.000000000000000000 | 0.0575800323 |  |
| ast\_cat1 | race\_final\_label | race\_final\_labelAmerican Indian | 14.557607056981877846624 | 1,029.1214758534 | 0.98871376914428810156 | 1.000000000000000000 | 0.0648385703 |  |
| ast\_cat1 | race\_final\_label | race\_final\_labelAmerican Indian/Alaskan Native | -1.701608372233768040616 | 1.2343138529 | 0.16802229177140004523 | 1.000000000000000000 | 0.0648385703 |  |
| ast\_cat1 | race\_final\_label | race\_final\_labelAsian | -1.701608372233752275449 | 1.2343138529 | 0.16802229177140320937 | 1.000000000000000000 | 0.0648385703 |  |
| ast\_cat1 | race\_final\_label | race\_final\_labelAsian/Pacific Islander | -1.008461191673823531545 | 0.8307811710 | 0.22479697897437164733 | 1.000000000000000000 | 0.0648385703 |  |
| ast\_cat1 | race\_final\_label | race\_final\_labelBlack | -1.168803841748986993565 | 0.2525635295 | 0.00000369638897086186 | 0.000203301393397402 | 0.0648385703 | \* |
| ast\_cat1 | race\_final\_label | race\_final\_labelMore than one race | 14.557607057021717977818 | 1,455.3975404289 | 0.99201929650937392680 | 1.000000000000000000 | 0.0648385703 |  |
| ast\_cat1 | race\_final\_label | race\_final\_labelOther | -0.448845403738391435233 | 0.6452812025 | 0.48669121054340086507 | 1.000000000000000000 | 0.0648385703 |  |
| ast\_cat1 | race\_final\_label | race\_final\_labelUnknown/Not Reported | -1.701608372233766264259 | 0.8795059337 | 0.05302317771292584803 | 1.000000000000000000 | 0.0648385703 |  |
| ast\_cat1 | ethnicity | ethnicityNot Hispanic | -0.537733076682945676517 | 0.5892646437 | 0.36147959516962535620 | 1.000000000000000000 | 0.0037344593 |  |
| ast\_cat1 | ethnicity | ethnicityUnknown/Not Reported | -0.916290731871174712886 | 0.7187948890 | 0.20239432125047965294 | 1.000000000000000000 | 0.0037344593 |  |
| ast\_cat1 | rural | ruralLiving in rural area | 1.406438927209557654407 | 0.5509393476 | 0.01068603030819293732 | 0.587731666950611520 | 0.0189979774 |  |
| ast\_cat1 | rural | ruralUnknown/Not Reported | 0.004640379556507700197 | 0.3512926732 | 0.98946069811372527880 | 1.000000000000000000 | 0.0189979774 |  |
| ast\_cat1 | smoking | smokingSmoke or use vape | 0.405465108106020821754 | 0.4173502296 | 0.33128819053225261326 | 1.000000000000000000 | 0.0023903182 |  |
| ast\_cat1 | smoking | smokingUnknown/Not Reported | -0.032848578955672697033 | 0.2510229510 | 0.89588695420764330457 | 1.000000000000000000 | 0.0023903182 |  |
| ast\_cat1 | sq\_drink\_alcohol | sq\_drink\_alcoholNo, former drinker (stopped) | 0.352878272005646365095 | 0.3610038165 | 0.32832573319251878718 | 1.000000000000000000 | 0.0115681511 |  |
| ast\_cat1 | sq\_drink\_alcohol | sq\_drink\_alcoholUnknown/Not Reported | -0.153970515877471431088 | 0.3191895841 | 0.62953637254223171471 | 1.000000000000000000 | 0.0115681511 |  |
| ast\_cat1 | sq\_drink\_alcohol | sq\_drink\_alcoholYes, current drinker | -0.383051513271153221130 | 0.3124626342 | 0.22023200877973925227 | 1.000000000000000000 | 0.0115681511 |  |
| ast\_cat1 | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_day1-2 alcoholic drinks per day | -0.302280871872938061706 | 0.5228509513 | 0.56316983197922798610 | 1.000000000000000000 | 0.0078398125 |  |
| ast\_cat1 | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_day3-4 alcoholic drinks per day | 0.390866308686806274153 | 0.8950701758 | 0.66233771109049455195 | 1.000000000000000000 | 0.0078398125 |  |
| ast\_cat1 | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_dayUnknown/Not Reported | 0.384750081669391785777 | 0.2635924505 | 0.14438904269431571126 | 1.000000000000000000 | 0.0078398125 |  |
| ast\_cat1 | sq\_self\_hep\_b | sq\_self\_hep\_bUnknown/Not Reported | -0.022051007371304737897 | 0.2458376486 | 0.92852765148853577681 | 1.000000000000000000 | 0.0018793692 |  |
| ast\_cat1 | sq\_self\_hep\_b | sq\_self\_hep\_bYes | -0.471374431379474712056 | 0.5052782427 | 0.35087123569997341610 | 1.000000000000000000 | 0.0018793692 |  |
| ast\_cat1 | sq\_self\_hep\_c | sq\_self\_hep\_cUnknown/Not Reported | -0.145182009844444959157 | 0.2447074824 | 0.55298843638136085943 | 1.000000000000000000 | 0.0011465345 |  |
| ast\_cat1 | sq\_self\_hep\_c | sq\_self\_hep\_cYes | -0.258510695151438152362 | 0.5119705998 | 0.61360610875827892308 | 1.000000000000000000 | 0.0011465345 |  |
| ast\_cat1 | supp\_meds\_tylenol | supp\_meds\_tylenolUnknown/Not Reported | -0.125434182391773063614 | 0.8733487845 | 0.88579708355501418637 | 1.000000000000000000 | 0.0025357981 |  |
| ast\_cat1 | supp\_meds\_tylenol | supp\_meds\_tylenolYes | -1.386294361119544404914 | 1.4999997246 | 0.35538406419748552745 | 1.000000000000000000 | 0.0025357981 |  |
| ast\_cat1 | supp\_meds\_steroids | supp\_meds\_steroidsUnknown/Not Reported | -0.356674943938690480749 | 0.8441995090 | 0.67265953764561814410 | 1.000000000000000000 | 0.0048370684 |  |
| ast\_cat1 | supp\_meds\_steroids | supp\_meds\_steroidsYes | -14.482357225249574028680 | 535.4118221578 | 0.97842064772067194323 | 1.000000000000000000 | 0.0048370684 |  |
| ast\_cat1 | sq\_water\_well | sq\_water\_wellUnknown/Not Reported | -0.003466207976487810545 | 0.2395463255 | 0.98845510439018802185 | 1.000000000000000000 | 0.0098684767 |  |
| ast\_cat1 | sq\_water\_well | sq\_water\_wellYes | 0.712565266414708409215 | 0.3666102949 | 0.05193662960975773540 | 1.000000000000000000 | 0.0098684767 |  |
| ast\_cat1 | sq\_water\_tap\_unfiltered | sq\_water\_tap\_unfilteredUnknown/Not Reported | -0.280713403135118721998 | 0.3122716071 | 0.36868468073984272948 | 1.000000000000000000 | 0.0021631830 |  |
| ast\_cat1 | sq\_water\_tap\_unfiltered | sq\_water\_tap\_unfilteredYes | -0.265759853468061579829 | 0.2967332629 | 0.37045645500997881339 | 1.000000000000000000 | 0.0021631830 |  |
| ast\_cat1 | sq\_water\_house\_filtration | sq\_water\_house\_filtrationUnknown/Not Reported | -0.189182647173841311794 | 0.2344924957 | 0.41979621355060015020 | 1.000000000000000000 | 0.0023177135 |  |
| ast\_cat1 | sq\_water\_house\_filtration | sq\_water\_house\_filtrationYes | 0.169418151957440060729 | 0.4121582975 | 0.68103501129152610449 | 1.000000000000000000 | 0.0023177135 |  |
| ast\_cat1 | sq\_water\_faucet\_filter | sq\_water\_faucet\_filterUnknown/Not Reported | -0.199354689350078884136 | 0.2623231214 | 0.44727938374625353379 | 1.000000000000000000 | 0.0012764581 |  |
| ast\_cat1 | sq\_water\_faucet\_filter | sq\_water\_faucet\_filterYes | -0.084993212833300940678 | 0.2843512769 | 0.76501469367372920694 | 1.000000000000000000 | 0.0012764581 |  |
| ast\_cat1 | sq\_water\_charcoal\_filter | sq\_water\_charcoal\_filterUnknown/Not Reported | -0.229741943026681105788 | 0.2406586182 | 0.33976062306482879283 | 1.000000000000000000 | 0.0023090277 |  |
| ast\_cat1 | sq\_water\_charcoal\_filter | sq\_water\_charcoal\_filterYes | 0.015817073683472508694 | 0.3410710551 | 0.96301158767872108157 | 1.000000000000000000 | 0.0023090277 |  |
| ast\_cat1 | sq\_water\_bottled | sq\_water\_bottledUnknown/Not Reported | -0.015851147737615558370 | 0.3031301746 | 0.95829638345137047040 | 1.000000000000000000 | 0.0012159396 |  |
| ast\_cat1 | sq\_water\_bottled | sq\_water\_bottledYes | 0.157489581092668889939 | 0.2944217639 | 0.59271107043812265580 | 1.000000000000000000 | 0.0012159396 |  |
| ast\_cat1 | sq\_water\_none | sq\_water\_noneUnknown/Not Reported | -0.204176395809693045358 | 0.2296647712 | 0.37399275024688943825 | 1.000000000000000000 | 0.0018647246 |  |
| ast\_cat1 | sq\_water\_none | sq\_water\_noneYes | 0.053652713492205766910 | 0.5681542690 | 0.92476492113338193413 | 1.000000000000000000 | 0.0018647246 |  |
| ast\_cat1 | sq\_water\_other\_type | sq\_water\_other\_typeUnknown/Not Reported | -0.174941449496309575640 | 0.2325031857 | 0.45179489645556714095 | 1.000000000000000000 | 0.0109594292 |  |
| ast\_cat1 | sq\_water\_other\_type | sq\_water\_other\_typeYes | 0.913620503318287147110 | 0.5181638040 | 0.07786868872707156108 | 1.000000000000000000 | 0.0109594292 |  |
| ast\_cat2 | age\_at\_enrollment | age\_at\_enrollment | -0.013842803235885601729 | 0.0114476941 | 0.22657758047574672045 | 1.000000000000000000 |  |  |
| ast\_cat2 | bmi | bmi | 0.014221759789009776401 | 0.0159134177 | 0.37148449643755793170 | 1.000000000000000000 |  |  |
| ast\_cat2 | trig\_mg\_d\_l | trig\_mg\_d\_l | 0.004958760342932038226 | 0.0014739073 | 0.00076720318002600500 | 0.042196174901430274 |  | \* |
| ast\_cat2 | source | sourceDUKE | 0.268314133271682964121 | 0.3442334861 | 0.43571238353629204720 | 1.000000000000000000 | 0.1499008180 |  |
| ast\_cat2 | source | sourceNCSU | -1.780063429461771207230 | 0.2983578922 | 0.00000000242839743302 | 0.000000133561858816 | 0.1499008180 | \* |
| ast\_cat2 | source | sourceUNC | 0.201739642649750888781 | 0.5842964881 | 0.72989192010768888519 | 1.000000000000000000 | 0.1499008180 |  |
| ast\_cat2 | sex | sexMale | 0.064500835744300988317 | 0.2256388462 | 0.77498631810551166232 | 1.000000000000000000 | 0.0001692257 |  |
| ast\_cat2 | race\_eth\_label | race\_eth\_labelNHB | -0.993251773009863780928 | 0.5506129105 | 0.07124665927493169237 | 1.000000000000000000 | 0.0339238789 |  |
| ast\_cat2 | race\_eth\_label | race\_eth\_labelNHO | -0.839101093182969326456 | 0.7517175812 | 0.26431721921877066039 | 1.000000000000000000 | 0.0339238789 |  |
| ast\_cat2 | race\_eth\_label | race\_eth\_labelNHW | -0.034786116085395314690 | 0.5232655372 | 0.94699655778108116078 | 1.000000000000000000 | 0.0339238789 |  |
| ast\_cat2 | race\_eth\_label | race\_eth\_labelUnknown/Not Reported | -0.810930216216288912712 | 0.6711160894 | 0.22692006009216589280 | 1.000000000000000000 | 0.0339238789 |  |
| ast\_cat2 | race\_final\_label | race\_final\_labelAmerican Indian | 15.315924095612087896257 | 1,029.1214735701 | 0.98812590293144209053 | 1.000000000000000000 | 0.0596588424 |  |
| ast\_cat2 | race\_final\_label | race\_final\_labelAmerican Indian/Alaskan Native | -15.816212401922113528485 | 840.2741682587 | 0.98498256041414788964 | 1.000000000000000000 | 0.0596588424 |  |
| ast\_cat2 | race\_final\_label | race\_final\_labelAsian | -0.943291333692658051646 | 1.2323648149 | 0.44401440742739406442 | 1.000000000000000000 | 0.0596588424 |  |
| ast\_cat2 | race\_final\_label | race\_final\_labelAsian/Pacific Islander | -0.250144153132713098486 | 0.8278826630 | 0.76253826453136153152 | 1.000000000000000000 | 0.0596588424 |  |
| ast\_cat2 | race\_final\_label | race\_final\_labelBlack | -1.050263453244830946787 | 0.2558785947 | 0.00004051234199911534 | 0.002228178809951344 | 0.0596588424 | \* |
| ast\_cat2 | race\_final\_label | race\_final\_labelMore than one race | -15.816212401919537811068 | 1,455.3975388529 | 0.99132933582473470313 | 1.000000000000000000 | 0.0596588424 |  |
| ast\_cat2 | race\_final\_label | race\_final\_labelOther | -0.432465709926674324315 | 0.6207976351 | 0.48603492747319898548 | 1.000000000000000000 | 0.0596588424 |  |
| ast\_cat2 | race\_final\_label | race\_final\_labelUnknown/Not Reported | -1.859582065566813824375 | 1.1039578964 | 0.09209120351902941315 | 1.000000000000000000 | 0.0596588424 |  |
| ast\_cat2 | ethnicity | ethnicityNot Hispanic | -0.347852355323562123512 | 0.5165849204 | 0.50071246195050056471 | 1.000000000000000000 | 0.0033074793 |  |
| ast\_cat2 | ethnicity | ethnicityUnknown/Not Reported | -0.810930216216315558064 | 0.6711160894 | 0.22692006009215123785 | 1.000000000000000000 | 0.0033074793 |  |
| ast\_cat2 | rural | ruralLiving in rural area | 1.941014178443090099080 | 0.5046602597 | 0.00011997365932021092 | 0.006598551262611600 | 0.0463460208 | \* |
| ast\_cat2 | rural | ruralUnknown/Not Reported | 0.694481759698375444856 | 0.3473618260 | 0.04557551165996261838 | 1.000000000000000000 | 0.0463460208 |  |
| ast\_cat2 | smoking | smokingSmoke or use vape | 0.820580472048383802175 | 0.3961457631 | 0.03832045547781643552 | 1.000000000000000000 | 0.0099749548 |  |
| ast\_cat2 | smoking | smokingUnknown/Not Reported | -0.030841105522573845910 | 0.2442317600 | 0.89951184652603288772 | 1.000000000000000000 | 0.0099749548 |  |
| ast\_cat2 | sq\_drink\_alcohol | sq\_drink\_alcoholNo, former drinker (stopped) | 0.254892249628795253269 | 0.3314960685 | 0.44194386146623554357 | 1.000000000000000000 | 0.0088287060 |  |
| ast\_cat2 | sq\_drink\_alcohol | sq\_drink\_alcoholUnknown/Not Reported | -0.204794412646007506495 | 0.3063941419 | 0.50387711204606999704 | 1.000000000000000000 | 0.0088287060 |  |
| ast\_cat2 | sq\_drink\_alcohol | sq\_drink\_alcoholYes, current drinker | -0.349673748479746637763 | 0.3037776084 | 0.24969740362725520444 | 1.000000000000000000 | 0.0088287060 |  |
| ast\_cat2 | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_day1-2 alcoholic drinks per day | -0.653230573152163596085 | 0.5727770709 | 0.25409381051218998815 | 1.000000000000000000 | 0.0106436718 |  |
| ast\_cat2 | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_day3-4 alcoholic drinks per day | 0.995428052432680510186 | 0.8950701758 | 0.26608530573792643636 | 1.000000000000000000 | 0.0106436718 |  |
| ast\_cat2 | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_dayUnknown/Not Reported | 0.294117561233769753137 | 0.2597646968 | 0.25753098953236847057 | 1.000000000000000000 | 0.0106436718 |  |
| ast\_cat2 | sq\_self\_hep\_b | sq\_self\_hep\_bUnknown/Not Reported | -0.054194650356505467970 | 0.2364616464 | 0.81872122610051045744 | 1.000000000000000000 | 0.0006653804 |  |
| ast\_cat2 | sq\_self\_hep\_b | sq\_self\_hep\_bYes | -0.277338177185268652813 | 0.5103757843 | 0.58685445807484615255 | 1.000000000000000000 | 0.0006653804 |  |
| ast\_cat2 | sq\_self\_hep\_c | sq\_self\_hep\_cUnknown/Not Reported | -0.105128054836923209847 | 0.2374821643 | 0.65799888505815062878 | 1.000000000000000000 | 0.0008818162 |  |
| ast\_cat2 | sq\_self\_hep\_c | sq\_self\_hep\_cYes | 0.205558646523452209776 | 0.5036749738 | 0.68318730283451767349 | 1.000000000000000000 | 0.0008818162 |  |
| ast\_cat2 | supp\_meds\_tylenol | supp\_meds\_tylenolUnknown/Not Reported | 0.598959965500006075168 | 0.8728061306 | 0.49255781449454139054 | 1.000000000000000000 | 0.0015280567 |  |
| ast\_cat2 | supp\_meds\_tylenol | supp\_meds\_tylenolYes | -0.000000000000042299489 | 1.4999997246 | 0.99999999999997746247 | 1.000000000000000000 | 0.0015280567 |  |
| ast\_cat2 | supp\_meds\_steroids | supp\_meds\_steroidsUnknown/Not Reported | 0.187892601843360762537 | 0.7714225593 | 0.80756666743789640162 | 1.000000000000000000 | 0.0027809706 |  |
| ast\_cat2 | supp\_meds\_steroids | supp\_meds\_steroidsYes | -13.278384420922492381578 | 535.4117132071 | 0.98021423193905476978 | 1.000000000000000000 | 0.0027809706 |  |
| ast\_cat2 | sq\_water\_well | sq\_water\_wellUnknown/Not Reported | -0.050250689677208922046 | 0.2346854004 | 0.83045397230453543713 | 1.000000000000000000 | 0.0120228589 |  |
| ast\_cat2 | sq\_water\_well | sq\_water\_wellYes | 0.714668316613816689831 | 0.3289436395 | 0.02980920718985883427 | 1.000000000000000000 | 0.0120228589 |  |
| ast\_cat2 | sq\_water\_tap\_unfiltered | sq\_water\_tap\_unfilteredUnknown/Not Reported | -0.347922150896313453483 | 0.2962590741 | 0.24024093421100631285 | 1.000000000000000000 | 0.0028702732 |  |
| ast\_cat2 | sq\_water\_tap\_unfiltered | sq\_water\_tap\_unfilteredYes | -0.220136030232662704975 | 0.2798917864 | 0.43157223337023120635 | 1.000000000000000000 | 0.0028702732 |  |
| ast\_cat2 | sq\_water\_house\_filtration | sq\_water\_house\_filtrationUnknown/Not Reported | -0.279171377847728219290 | 0.2280148816 | 0.22081797753371337767 | 1.000000000000000000 | 0.0033320508 |  |
| ast\_cat2 | sq\_water\_house\_filtration | sq\_water\_house\_filtrationYes | 0.000000000000000170395 | 0.3836954811 | 0.99999999999999966693 | 1.000000000000000000 | 0.0033320508 |  |
| ast\_cat2 | sq\_water\_faucet\_filter | sq\_water\_faucet\_filterUnknown/Not Reported | -0.249875370558082871009 | 0.2528925411 | 0.32311868169280000274 | 1.000000000000000000 | 0.0020282842 |  |
| ast\_cat2 | sq\_water\_faucet\_filter | sq\_water\_faucet\_filterYes | -0.119444757101601337079 | 0.2717892889 | 0.66031696807642703551 | 1.000000000000000000 | 0.0020282842 |  |
| ast\_cat2 | sq\_water\_charcoal\_filter | sq\_water\_charcoal\_filterUnknown/Not Reported | -0.303081947469558132813 | 0.2334168672 | 0.19413007485932087803 | 1.000000000000000000 | 0.0035834448 |  |
| ast\_cat2 | sq\_water\_charcoal\_filter | sq\_water\_charcoal\_filterYes | -0.197156623083425935894 | 0.3241344564 | 0.54301791298141055542 | 1.000000000000000000 | 0.0035834448 |  |
| ast\_cat2 | sq\_water\_bottled | sq\_water\_bottledUnknown/Not Reported | -0.115684394301602544441 | 0.2959120606 | 0.69584025409051053490 | 1.000000000000000000 | 0.0039656265 |  |
| ast\_cat2 | sq\_water\_bottled | sq\_water\_bottledYes | 0.215162662857548758755 | 0.2841576044 | 0.44893316002661781683 | 1.000000000000000000 | 0.0039656265 |  |
| ast\_cat2 | sq\_water\_none | sq\_water\_noneUnknown/Not Reported | -0.237954698131189440469 | 0.2228713023 | 0.28566596409044692217 | 1.000000000000000000 | 0.0028442327 |  |
| ast\_cat2 | sq\_water\_none | sq\_water\_noneYes | 0.154150679794893996633 | 0.5371008608 | 0.77410842445259042677 | 1.000000000000000000 | 0.0028442327 |  |
| ast\_cat2 | sq\_water\_other\_type | sq\_water\_other\_typeUnknown/Not Reported | -0.167160915843783758339 | 0.2268612827 | 0.46121845312286885443 | 1.000000000000000000 | 0.0011446621 |  |
| ast\_cat2 | sq\_water\_other\_type | sq\_water\_other\_typeYes | -0.031548357734394370799 | 0.4118711572 | 0.93894363816440584714 | 1.000000000000000000 | 0.0011446621 |  |
| log\_alt | age\_at\_enrollment | age\_at\_enrollment | -0.002207931290548020755 | 0.0036360310 | 0.54410770346741132997 | 1.000000000000000000 | 0.0011060916 |  |
| log\_alt | bmi | bmi | -0.002513717277598035219 | 0.0050335132 | 0.61785684102040316912 | 1.000000000000000000 | 0.0008090739 |  |
| log\_alt | trig\_mg\_d\_l | trig\_mg\_d\_l | 0.002136954448727863831 | 0.0004087705 | 0.00000029702078293536 | 0.000016336143061445 | 0.0730091573 | \* |
| log\_alt | source | sourceDUKE | 0.023452637803875613781 | 0.0932191676 | 0.80151087153497713178 | 1.000000000000000000 | 0.1426810356 |  |
| log\_alt | source | sourceNCSU | -0.451334186129095371598 | 0.0804749170 | 0.00000004192202717263 | 0.000002305711494495 | 0.1426810356 | \* |
| log\_alt | source | sourceUNC | -0.580857818530252201228 | 0.1574175145 | 0.00026057867885849819 | 0.014331827337217400 | 0.1426810356 | \* |
| log\_alt | sex | sexMale | 0.293565778182391934337 | 0.0695276778 | 0.00003092801516637812 | 0.001701040834150796 | 0.0488660907 | \* |
| log\_alt | race\_eth\_label | race\_eth\_labelNHB | -0.283741388452009801746 | 0.1687843984 | 0.09365351624376080930 | 1.000000000000000000 | 0.0366038264 |  |
| log\_alt | race\_eth\_label | race\_eth\_labelNHO | -0.041355467200318157817 | 0.2282218045 | 0.85631154750756011129 | 1.000000000000000000 | 0.0366038264 |  |
| log\_alt | race\_eth\_label | race\_eth\_labelNHW | -0.010185964299059118224 | 0.1619037031 | 0.94987174887869363360 | 1.000000000000000000 | 0.0366038264 |  |
| log\_alt | race\_eth\_label | race\_eth\_labelUnknown/Not Reported | -0.009292804234793566528 | 0.2048995400 | 0.96385227655349048348 | 1.000000000000000000 | 0.0366038264 |  |
| log\_alt | race\_final\_label | race\_final\_labelAmerican Indian | 0.279313749991340731782 | 0.4402045182 | 0.52617536404187958965 | 1.000000000000000000 | 0.0597594782 |  |
| log\_alt | race\_final\_label | race\_final\_labelAmerican Indian/Alaskan Native | -0.271359749299462493788 | 0.3602451555 | 0.45181248655151318161 | 1.000000000000000000 | 0.0597594782 |  |
| log\_alt | race\_final\_label | race\_final\_labelAsian | 0.592360125443486262853 | 0.3602451555 | 0.10103333543861844901 | 1.000000000000000000 | 0.0597594782 |  |
| log\_alt | race\_final\_label | race\_final\_labelAsian/Pacific Islander | 0.134201159408316089694 | 0.2564627191 | 0.60112204908542810067 | 1.000000000000000000 | 0.0597594782 |  |
| log\_alt | race\_final\_label | race\_final\_labelBlack | -0.284235726555603918086 | 0.0748991807 | 0.00017482052727714440 | 0.009615129000242943 | 0.0597594782 | \* |
| log\_alt | race\_final\_label | race\_final\_labelMore than one race | -0.038332443939543818512 | 0.6211202421 | 0.95082604624480770994 | 1.000000000000000000 | 0.0597594782 |  |
| log\_alt | race\_final\_label | race\_final\_labelOther | -0.310903607665994174969 | 0.1915219333 | 0.10544528872624954474 | 1.000000000000000000 | 0.0597594782 |  |
| log\_alt | race\_final\_label | race\_final\_labelUnknown/Not Reported | -0.252816376335292858357 | 0.2564627191 | 0.32494099441616330903 | 1.000000000000000000 | 0.0597594782 |  |
| log\_alt | ethnicity | ethnicityNot Hispanic | -0.093391840462538469603 | 0.1622486579 | 0.56525343931780080986 | 1.000000000000000000 | 0.0018946465 |  |
| log\_alt | ethnicity | ethnicityUnknown/Not Reported | -0.009292804234792810189 | 0.2079542925 | 0.96438276306881798305 | 1.000000000000000000 | 0.0018946465 |  |
| log\_alt | rural | ruralLiving in rural area | 0.439547871840265280685 | 0.1188958984 | 0.00025366477747338766 | 0.013951562761036321 | 0.0455946229 | \* |
| log\_alt | rural | ruralUnknown/Not Reported | 0.220437220888875878844 | 0.1057814927 | 0.03790332655782279597 | 1.000000000000000000 | 0.0455946229 |  |
| log\_alt | smoking | smokingSmoke or use vape | 0.042593643465363727196 | 0.1198650741 | 0.72254649159755524046 | 1.000000000000000000 | 0.0004898065 |  |
| log\_alt | smoking | smokingUnknown/Not Reported | 0.021126079837295433372 | 0.0769745892 | 0.78389858361138575749 | 1.000000000000000000 | 0.0004898065 |  |
| log\_alt | sq\_drink\_alcohol | sq\_drink\_alcoholNo, former drinker (stopped) | 0.032363067662670511049 | 0.1045507093 | 0.75709445325403834648 | 1.000000000000000000 | 0.0031424337 |  |
| log\_alt | sq\_drink\_alcohol | sq\_drink\_alcoholUnknown/Not Reported | -0.001424911553872977056 | 0.0968186621 | 0.98826620588811753265 | 1.000000000000000000 | 0.0031424337 |  |
| log\_alt | sq\_drink\_alcohol | sq\_drink\_alcoholYes, current drinker | -0.063414231272510182547 | 0.0955910151 | 0.50752310957445012640 | 1.000000000000000000 | 0.0031424337 |  |
| log\_alt | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_day1-2 alcoholic drinks per day | -0.178189090513833220397 | 0.1624579236 | 0.27347971638646917381 | 1.000000000000000000 | 0.0365199013 |  |
| log\_alt | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_day3-4 alcoholic drinks per day | 0.831620200693489408650 | 0.2635953308 | 0.00174662174238806645 | 0.096064195831343652 | 0.0365199013 |  |
| log\_alt | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_dayUnknown/Not Reported | 0.089360620554987724162 | 0.0801904686 | 0.26590277655605354390 | 1.000000000000000000 | 0.0365199013 |  |
| log\_alt | sq\_self\_hep\_b | sq\_self\_hep\_bUnknown/Not Reported | 0.026116634585132490753 | 0.0747540851 | 0.72702609365666726049 | 1.000000000000000000 | 0.0003948772 |  |
| log\_alt | sq\_self\_hep\_b | sq\_self\_hep\_bYes | 0.027306711391137595407 | 0.1592689037 | 0.86396988289571252650 | 1.000000000000000000 | 0.0003948772 |  |
| log\_alt | sq\_self\_hep\_c | sq\_self\_hep\_cUnknown/Not Reported | -0.001862266355244789106 | 0.0745408597 | 0.98008279661138675287 | 1.000000000000000000 | 0.0112182611 |  |
| log\_alt | sq\_self\_hep\_c | sq\_self\_hep\_cYes | -0.310928346810976474757 | 0.1583800978 | 0.05042614787857236519 | 1.000000000000000000 | 0.0112182611 |  |
| log\_alt | supp\_meds\_tylenol | supp\_meds\_tylenolUnknown/Not Reported | 0.199051890540264675433 | 0.2603916998 | 0.44513053306029259915 | 1.000000000000000000 | 0.0039299509 |  |
| log\_alt | supp\_meds\_tylenol | supp\_meds\_tylenolYes | -0.128351370282677068602 | 0.4470840465 | 0.77421866314674403498 | 1.000000000000000000 | 0.0039299509 |  |
| log\_alt | supp\_meds\_steroids | supp\_meds\_steroidsUnknown/Not Reported | 0.199607718895820573923 | 0.2416537365 | 0.40936921819214344698 | 1.000000000000000000 | 0.0019742556 |  |
| log\_alt | supp\_meds\_steroids | supp\_meds\_steroidsYes | 0.166164401400813399601 | 0.6765907807 | 0.80614470067240429074 | 1.000000000000000000 | 0.0019742556 |  |
| log\_alt | sq\_water\_well | sq\_water\_wellUnknown/Not Reported | 0.031794331021595220732 | 0.0735584492 | 0.66584190168062762361 | 1.000000000000000000 | 0.0086832953 |  |
| log\_alt | sq\_water\_well | sq\_water\_wellYes | 0.175275227781433451391 | 0.1009848390 | 0.08351446215008491436 | 1.000000000000000000 | 0.0086832953 |  |
| log\_alt | sq\_water\_tap\_unfiltered | sq\_water\_tap\_unfilteredUnknown/Not Reported | 0.034781136884748389826 | 0.0934568701 | 0.70999974329296122733 | 1.000000000000000000 | 0.0007495389 |  |
| log\_alt | sq\_water\_tap\_unfiltered | sq\_water\_tap\_unfilteredYes | -0.002692238993044254475 | 0.0884947990 | 0.97574758748137857545 | 1.000000000000000000 | 0.0007495389 |  |
| log\_alt | sq\_water\_house\_filtration | sq\_water\_house\_filtrationUnknown/Not Reported | -0.063383304829863762464 | 0.0713989594 | 0.37530036999589655444 | 1.000000000000000000 | 0.0119040603 |  |
| log\_alt | sq\_water\_house\_filtration | sq\_water\_house\_filtrationYes | -0.242150098986196132822 | 0.1208135028 | 0.04581367228512419482 | 1.000000000000000000 | 0.0119040603 |  |
| log\_alt | sq\_water\_faucet\_filter | sq\_water\_faucet\_filterUnknown/Not Reported | 0.026894860167019651181 | 0.0797826336 | 0.73624463818351904010 | 1.000000000000000000 | 0.0013977116 |  |
| log\_alt | sq\_water\_faucet\_filter | sq\_water\_faucet\_filterYes | 0.059821107807707891990 | 0.0859663378 | 0.48697948002813928881 | 1.000000000000000000 | 0.0013977116 |  |
| log\_alt | sq\_water\_charcoal\_filter | sq\_water\_charcoal\_filterUnknown/Not Reported | -0.044433081808467667084 | 0.0735163837 | 0.54597583794896786813 | 1.000000000000000000 | 0.0015987062 |  |
| log\_alt | sq\_water\_charcoal\_filter | sq\_water\_charcoal\_filterYes | -0.062228675890708871898 | 0.1023346704 | 0.54352681497738963845 | 1.000000000000000000 | 0.0015987062 |  |
| log\_alt | sq\_water\_bottled | sq\_water\_bottledUnknown/Not Reported | 0.052163065090516949618 | 0.0931437335 | 0.57582297637771451271 | 1.000000000000000000 | 0.0012439377 |  |
| log\_alt | sq\_water\_bottled | sq\_water\_bottledYes | 0.009158367772328304332 | 0.0897440181 | 0.91877618471542354950 | 1.000000000000000000 | 0.0012439377 |  |
| log\_alt | sq\_water\_none | sq\_water\_noneUnknown/Not Reported | -0.024571004733646099188 | 0.0702387267 | 0.72668562512249468277 | 1.000000000000000000 | 0.0004187553 |  |
| log\_alt | sq\_water\_none | sq\_water\_noneYes | 0.014818283198648621660 | 0.1697441939 | 0.93048535644686258816 | 1.000000000000000000 | 0.0004187553 |  |
| log\_alt | sq\_water\_other\_type | sq\_water\_other\_typeUnknown/Not Reported | -0.008960304389123525601 | 0.0714075422 | 0.90021548106385096411 | 1.000000000000000000 | 0.0060226543 |  |
| log\_alt | sq\_water\_other\_type | sq\_water\_other\_typeYes | 0.178810780552914438957 | 0.1299887886 | 0.16983964617600338931 | 1.000000000000000000 | 0.0060226543 |  |
| log\_ast | age\_at\_enrollment | age\_at\_enrollment | -0.000894680486018714985 | 0.0034000958 | 0.79261010552976784993 | 1.000000000000000000 | 0.0002078831 |  |
| log\_ast | bmi | bmi | -0.003148038802301751649 | 0.0047657748 | 0.50939382362342866539 | 1.000000000000000000 | 0.0014146454 |  |
| log\_ast | trig\_mg\_d\_l | trig\_mg\_d\_l | 0.001085513580212882270 | 0.0003935483 | 0.00611857351010645575 | 0.336521543055855077 | 0.0214548628 |  |
| log\_ast | source | sourceDUKE | -0.017174623118332846966 | 0.0837296002 | 0.83759926829204123244 | 1.000000000000000000 | 0.2123043648 |  |
| log\_ast | source | sourceNCSU | -0.561120471884103633187 | 0.0722826947 | 0.00000000000009528458 | 0.000000000005240652 | 0.2123043648 | \* |
| log\_ast | source | sourceUNC | -0.103062836486866066243 | 0.1413926545 | 0.46654986337810855357 | 1.000000000000000000 | 0.2123043648 |  |
| log\_ast | sex | sexMale | 0.238018976647827035231 | 0.0655706768 | 0.00032612808970571022 | 0.017937044933814063 | 0.0365837587 | \* |
| log\_ast | race\_eth\_label | race\_eth\_labelNHB | -0.041526075166507463166 | 0.1586994971 | 0.79373646708592959786 | 1.000000000000000000 | 0.0300265831 |  |
| log\_ast | race\_eth\_label | race\_eth\_labelNHO | 0.030376613721768312010 | 0.2145855064 | 0.88751083496110694249 | 1.000000000000000000 | 0.0300265831 |  |
| log\_ast | race\_eth\_label | race\_eth\_labelNHW | 0.186528788626513286619 | 0.1522299247 | 0.22129686737814927011 | 1.000000000000000000 | 0.0300265831 |  |
| log\_ast | race\_eth\_label | race\_eth\_labelUnknown/Not Reported | 0.157264542450719579936 | 0.1926567518 | 0.41489692385078369430 | 1.000000000000000000 | 0.0300265831 |  |
| log\_ast | race\_final\_label | race\_final\_labelAmerican Indian | 0.635146373673752706601 | 0.4125818871 | 0.12462626106774510326 | 1.000000000000000000 | 0.0593702665 |  |
| log\_ast | race\_final\_label | race\_final\_labelAmerican Indian/Alaskan Native | -0.693357476543256745494 | 0.3376399377 | 0.04078464043504152065 | 1.000000000000000000 | 0.0593702665 |  |
| log\_ast | race\_final\_label | race\_final\_labelAsian | 0.090449611738995239207 | 0.3376399377 | 0.78894814673328206300 | 1.000000000000000000 | 0.0593702665 |  |
| log\_ast | race\_final\_label | race\_final\_labelAsian/Pacific Islander | -0.025070159049348984814 | 0.2403698014 | 0.91699413252677142161 | 1.000000000000000000 | 0.0593702665 |  |
| log\_ast | race\_final\_label | race\_final\_labelBlack | -0.243203532164696173412 | 0.0701992916 | 0.00059925509756018739 | 0.032959030365810306 | 0.0593702665 | \* |
| log\_ast | race\_final\_label | race\_final\_labelMore than one race | -0.473775558595718182531 | 0.5821452326 | 0.41630376597804408245 | 1.000000000000000000 | 0.0593702665 |  |
| log\_ast | race\_final\_label | race\_final\_labelOther | -0.206024221777257293686 | 0.1795040201 | 0.25188220670961430914 | 1.000000000000000000 | 0.0593702665 |  |
| log\_ast | race\_final\_label | race\_final\_labelUnknown/Not Reported | -0.400069105433961902385 | 0.2403698014 | 0.09695576779105187504 | 1.000000000000000000 | 0.0593702665 |  |
| log\_ast | ethnicity | ethnicityNot Hispanic | 0.111302959747361693288 | 0.1520286894 | 0.46459207744158959041 | 1.000000000000000000 | 0.0019927963 |  |
| log\_ast | ethnicity | ethnicityUnknown/Not Reported | 0.157264542450722716316 | 0.1948553470 | 0.42017280121676781057 | 1.000000000000000000 | 0.0019927963 |  |
| log\_ast | rural | ruralLiving in rural area | 0.345068598864175402063 | 0.1117282858 | 0.00217467773087302255 | 0.119607275198016241 | 0.0401711111 |  |
| log\_ast | rural | ruralUnknown/Not Reported | 0.253071909242553072517 | 0.0994044791 | 0.01133333024447272241 | 0.623333163445999761 | 0.0401711111 |  |
| log\_ast | smoking | smokingSmoke or use vape | 0.418054566377207448280 | 0.1100729513 | 0.00017226724904580409 | 0.009474698697519225 | 0.0400877200 | \* |
| log\_ast | smoking | smokingUnknown/Not Reported | 0.042350027696228850771 | 0.0706863135 | 0.54948075437577892366 | 1.000000000000000000 | 0.0400877200 |  |
| log\_ast | sq\_drink\_alcohol | sq\_drink\_alcoholNo, former drinker (stopped) | 0.178923564483066510622 | 0.0968905171 | 0.06565309989651595124 | 1.000000000000000000 | 0.0249876790 |  |
| log\_ast | sq\_drink\_alcohol | sq\_drink\_alcoholUnknown/Not Reported | 0.003000983507399579853 | 0.0897249793 | 0.97333789728665620622 | 1.000000000000000000 | 0.0249876790 |  |
| log\_ast | sq\_drink\_alcohol | sq\_drink\_alcoholYes, current drinker | -0.088484971592530672901 | 0.0885872793 | 0.31856977126883023743 | 1.000000000000000000 | 0.0249876790 |  |
| log\_ast | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_day1-2 alcoholic drinks per day | -0.074991856207321780370 | 0.1516597899 | 0.62128602114516762178 | 1.000000000000000000 | 0.0437526021 |  |
| log\_ast | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_day3-4 alcoholic drinks per day | 0.804942710560363261507 | 0.2460748704 | 0.00117931029619504032 | 0.064862066290727216 | 0.0437526021 |  |
| log\_ast | sq\_average\_drink\_per\_day | sq\_average\_drink\_per\_dayUnknown/Not Reported | 0.174996326486558606561 | 0.0748604275 | 0.01997739563050116018 | 1.000000000000000000 | 0.0437526021 |  |
| log\_ast | sq\_self\_hep\_b | sq\_self\_hep\_bUnknown/Not Reported | 0.020494848366305471604 | 0.0700213340 | 0.76993124070565788220 | 1.000000000000000000 | 0.0011787184 |  |
| log\_ast | sq\_self\_hep\_b | sq\_self\_hep\_bYes | 0.090283445612804338887 | 0.1491854403 | 0.54545877749692217584 | 1.000000000000000000 | 0.0011787184 |  |
| log\_ast | sq\_self\_hep\_c | sq\_self\_hep\_cUnknown/Not Reported | -0.001751118339923484184 | 0.0702241441 | 0.98012028422528474358 | 1.000000000000000000 | 0.0005686555 |  |
| log\_ast | sq\_self\_hep\_c | sq\_self\_hep\_cYes | 0.064827699325887430670 | 0.1492081906 | 0.66421208375660967249 | 1.000000000000000000 | 0.0005686555 |  |
| log\_ast | supp\_meds\_tylenol | supp\_meds\_tylenolUnknown/Not Reported | 0.019077097160450636609 | 0.2439742605 | 0.93771967161453928519 | 1.000000000000000000 | 0.0041543210 |  |
| log\_ast | supp\_meds\_tylenol | supp\_meds\_tylenolYes | -0.393071744017929936010 | 0.4188958394 | 0.34871810359798904866 | 1.000000000000000000 | 0.0041543210 |  |
| log\_ast | supp\_meds\_steroids | supp\_meds\_steroidsUnknown/Not Reported | 0.049030535582638770653 | 0.2264722823 | 0.82872806818337796386 | 1.000000000000000000 | 0.0017179956 |  |
| log\_ast | supp\_meds\_steroids | supp\_meds\_steroidsYes | -0.391896423588799669435 | 0.6340852017 | 0.53694891093218777289 | 1.000000000000000000 | 0.0017179956 |  |
| log\_ast | sq\_water\_well | sq\_water\_wellUnknown/Not Reported | -0.007923263496710760898 | 0.0687263326 | 0.90828439435423902193 | 1.000000000000000000 | 0.0144877006 |  |
| log\_ast | sq\_water\_well | sq\_water\_wellYes | 0.197637634073006940305 | 0.0943510597 | 0.03692407167111402128 | 1.000000000000000000 | 0.0144877006 |  |
| log\_ast | sq\_water\_tap\_unfiltered | sq\_water\_tap\_unfilteredUnknown/Not Reported | -0.102549395251678790442 | 0.0873703559 | 0.24130962272393452483 | 1.000000000000000000 | 0.0053998582 |  |
| log\_ast | sq\_water\_tap\_unfiltered | sq\_water\_tap\_unfilteredYes | -0.107040077507011749391 | 0.0827314469 | 0.19658860233893996061 | 1.000000000000000000 | 0.0053998582 |  |
| log\_ast | sq\_water\_house\_filtration | sq\_water\_house\_filtrationUnknown/Not Reported | -0.086496646376191185790 | 0.0671323836 | 0.19845063961372458317 | 1.000000000000000000 | 0.0051722326 |  |
| log\_ast | sq\_water\_house\_filtration | sq\_water\_house\_filtrationYes | -0.078298083702701387621 | 0.1135940702 | 0.49110926211419925203 | 1.000000000000000000 | 0.0051722326 |  |
| log\_ast | sq\_water\_faucet\_filter | sq\_water\_faucet\_filterUnknown/Not Reported | -0.087667300833286568307 | 0.0745905537 | 0.24067736959729044144 | 1.000000000000000000 | 0.0059416054 |  |
| log\_ast | sq\_water\_faucet\_filter | sq\_water\_faucet\_filterYes | -0.103484062806179250016 | 0.0803718360 | 0.19875754599121239763 | 1.000000000000000000 | 0.0059416054 |  |
| log\_ast | sq\_water\_charcoal\_filter | sq\_water\_charcoal\_filterUnknown/Not Reported | -0.089678813490724623714 | 0.0686668459 | 0.19242057708345136624 | 1.000000000000000000 | 0.0080278546 |  |
| log\_ast | sq\_water\_charcoal\_filter | sq\_water\_charcoal\_filterYes | -0.135299017119704628742 | 0.0955841228 | 0.15782235141006520363 | 1.000000000000000000 | 0.0080278546 |  |
| log\_ast | sq\_water\_bottled | sq\_water\_bottledUnknown/Not Reported | 0.024805326618798459459 | 0.0870904426 | 0.77595045429210707244 | 1.000000000000000000 | 0.0055989959 |  |
| log\_ast | sq\_water\_bottled | sq\_water\_bottledYes | 0.102812872716518927119 | 0.0839116703 | 0.22131400403950987621 | 1.000000000000000000 | 0.0055989959 |  |
| log\_ast | sq\_water\_none | sq\_water\_noneUnknown/Not Reported | -0.057684249219906121031 | 0.0657581618 | 0.38097686250387818863 | 1.000000000000000000 | 0.0022250837 |  |
| log\_ast | sq\_water\_none | sq\_water\_noneYes | -0.017033898718126203042 | 0.1589161235 | 0.91470197254775320594 | 1.000000000000000000 | 0.0022250837 |  |
| log\_ast | sq\_water\_other\_type | sq\_water\_other\_typeUnknown/Not Reported | -0.029607954453489373353 | 0.0670702908 | 0.65916542631226460180 | 1.000000000000000000 | 0.0013412561 |  |
| log\_ast | sq\_water\_other\_type | sq\_water\_other\_typeYes | 0.049419977220526677131 | 0.1220933474 | 0.68589518031277396659 | 1.000000000000000000 | 0.0013412561 |  |