Germany drinking indicators
(one standard drink contains 14 grams alcohol, information from Ludwig Kraus)

In the German questionnaire (alcohol consumption) questions about the last 30 days and <u>then</u> about the last 12 months are being asked. I.e.: Persons giving answers about the last 30 days are not being asked about the last 12 months. We have considered the complete questionnaire as one instrument and have created only one variable each (answers of 30-days-drinkers were extrapolated to 12 months).

Drinking status

drin5_02: (drinking status using a mixture of time frames) values: 0 (lifetime abstainer); 1 (12 months abstainer); 2 (current drinker)

If nodd__02 > 0 (total drinking frequency in days last 12 months) => 2 (current drinker)
If nodd__02 = 0 and if dfuo_02c (F61_6) (never drank alcohol) is not answered => 1(12 months abstainer)
If dfuo_02c (F61_6) (never drank alcohol) is positively answered => 0 (lifetime abstainer)
There are 8 inconsistencies. Correction: If drinker=0 and bsvo5_02>0 drinker=2. (bsvo5_02: annual volume based on beverage specific measures).

Overall frequencies

nodd__02: (annual number of drinking days) maximum of overall frequency and beverage specific frequencies: nodd__02=max(gefr5_02, befr5_02, wifr5_02, spfr5_02).

gefr5_02: (overall frequency last 12 months)
1. if person drank in the last 30 days take dfuo_02a*12 (**F65**): drinking frequency in the last 30 days (number of days),
2. if the person drank not during the last 30 days take dfuo_02b (**F69_2**): total drinking frequency in days (last 12 months) (number of days) (not asked to people who drank during the last 30 days),
3. if person never drank alcohol (dfuo_02c (**F61_6**)) dfuo_02=0

beverage specific frequencies

befr5_02: (frequency of drinking beer; reference period: mixture) (31 missings)
1. take dfub_02b (**F68_1B**) (frequency of drinking beer last 12 months) (skipped if person drank alcohol in the last 30 days or if person answered to dfub_02a)
2. if missing take dfub_02a*12 (**F68_1A**) (frequency of drinking beer last 12 months, times per month) (not asked, if person drank during the last 30 days)
3. if missing take dfub_02d*12 (**F64_1**) (frequency of beer during last 30 days)
4. if still missing take dfub_02c (**F59_6**) (frequency of beer):
   (daily => 365 days per year,
   several times per week => 208 days per year = average of 365 and 52,
   once a week => 52 days per year,
   several times a month => 32 days per year, it is 2,5 times per month
   once a month => 12 days per year
   less than once a month => 6 days per year)
5. if beer quantity is 0 set beer frequency to 0: if bequ5_02=0 befr5_02=0.

wifr5_02: (frequency of drinking wine; reference period: mixture) (28 missings)
1. take dfuw_02b (**F68_2B**) (frequency of drinking wine last 12 months) (skipped if person drank alcohol in the last 30 days or if person answered to dfuw_02a)
2. if missing take dfuw_02a*12 (**F68_2A**) (frequency of drinking wine last 12 months, times per month) (not asked, if person drank during the last 30 days)
3. if missing take dfuw_02d*12 (**F64_2**) (frequency of wine during last 30 days)
4. if still missing take dfuw_02c (**F59_7**) (frequency of wine):
   (daily => 365 days per year,
   several times per week => 208 days per year = average of 365 and 52,

once a week => 52 days per year,
several times a month => 32 days per year, it is 2,5 times per month
once a month => 12 days per year
less than once a month => 6 days per year)
5. if wine quantity is 0 set wine frequency to 0: if wiqu5_02=0 wifr5_02=0.

spfr5_02: (frequency of drinking spirits; reference period: mixture) (36 missings)
1. take dful_02b (**F68_3B**) (frequency of drinking spirits last 12 months) (skipped if person drank alcohol in the last 30 days or if person answered to dful_02a)
2. if missing take dful_02a*12 (**F68_3A**) (frequency of drinking spirits last 12 months, times per month) (not asked, if person drank during the last 30 days)
3. if missing take dful_02d*12 (**F64_3**) (frequency of spirits during last 30 days)
4. if still missing take dful_02c (**F59_8**) (frequency of spirits):
(daily => 365 days per year,
several times per week => 208 days per year = average of 365 and 52,
once a week => 52 days per year,
several times a month => 32 days per year, it is 2,5 times per month
once a month => 12 days per year
less than once a month => 6 days per year)
5. if spirits quantity is 0 set spirits frequency to 0: if spqu5_02=0 spfr5_02=0.

Quantities per drinking occasion

bequ5_02: (usual quantity of beer) bequ5_02=gdndb_02*0.265*0.048*0.794*1000.
(0.265 litres has a small standard beer glass, 4,8%vol. ethanol)
gdndb_02 (small drinks 0,2 - 0,33 liter) (quantity beer last 12 months on a drinking day)
- number of drinks (beer, small glasses) plus 0,45/0,265* number of drinks (beer, large glasses) on a drinking day in the last 12 months => dndb_02=dndb_02a+0,45/0,265*dndb_02b.
- if missing: (person drank in the last 30 days) number of drinks (beer, small glasses) plus 0,5/0,3* number of drinks (beer, large glasses) on a drinking day in the last 30 days => dndb_02=dndb_02c+0,45/0,265*dndb_02d.
- if missing: abstainers (dndb_02e=996 never drank alcohol, dndb_02f= 0 no alc during last 30 days) => dndb_02=0.
- Problem: many respondents indicated very big quantities (Infas assumed: the question was misunderstood – possibly the quantities refer to the last 30 days/12 months in total, and not to a typical drinking day) Correction (according to Ludwig): if indicated more than 20 small glasses of beer on a single drinking day this quantity will be divided by frequency (dfub_02).
- Correction: if frequency is 0, quantity will also be put to 0 (10 persons)
Correction replacement of missing values (more than 800 persons reported 0 with quantity although frequency was reported): replacement of quantity by mean between 0 and smallest category (0,5).

wiqu5_02: (usual quantity of wine) wiqu5_02=gdndw_02*0.225*0.11*0.794*1000. (0.225 litres has a standard wine glass, 11% vol. ethanol)
gdndw_02 (quantity wine last 12 months on a drinking day)
- number of drinks (wine) on a drinking day in the last 12 months => dndw_02=dndw_02b
- if missing (person drank during last 30 days) take number of drinks (wine) on a drinking day in the last 30 days => dndw_02=dndw_02a.
- if missing: abstainers (dndw_02c=996) 0 days => dndw_02=0.
- Problem: many respondents indicated very high quantities (Infas assumed: the question was misunderstood – possibly the quantities refer to the last 30 days/12 months in total, and not to a typical drinking day) Correction (according to Ludwig): if indicated more than 10 glasses of wine on a single drinking day this quantity will be divided by frequency (dfuw_02). .
- Correction: if frequency is 0, quantity will also be put to 0 (10 persons)
- Correction: missing value if frequency is not 0 and quantity =sysmis (2 persons)(replacement by median of the frequency group)
- Correction of replacement of missing values (more than 1100 persons report 0 with quantity although they report frequencies): replacement of quantity by mean between 0 and smallest category (0,5).

spqu5_02: (usual quantity of spirits) spqu5_02=gdndl_02*0.02*0.33*0.794*1000.
(0.02 has a small spirits glass, 33% vol ethanol)

dndl_02 (number of drinks spirit, small glasses, 0,02 liter on a drinking day)
- number of drinks (spirits, small glasses) plus 2* number of drinks (spirits, large glasses) on a drinking day in the last 12 months => dndl_02=dndl_02a+2*dndl_02b.
- if missing: (person drank in the last 30 days) number of drinks (spirits, small glasses) plus 2* number of drinks (spirits, large glasses) on a drinking day in the last 30 days => dndl_02=dndl_02c+2*dndl_02d.
- if missing: abstainers (dndl_02e=996 never drank alcohol, dndl_02f= 0 no alc during last 30 days) => dndl_02=0.
- Problem: many respondents indicated very big quantities (Infas assumed: the question was misunderstood – possibly the quantities refer to the last 30 days/12 months in total, and not to a typical drinking day) Correction (according to Ludwig): if indicated more than 20 small glasses of spirits on a single drinking day this quantity will be divided by frequency (dful_02). Correction: if frequency is 0, quantity will also be put to 0 (about 150 persons)
- Correction replacement of missing values (more than 200 persons reported 0 with quantity although they reported frequencies): replacement of quantity by mean between 0 and smallest category (0,5).

Volume

bevo5_02: (annual volume of beer) derived by multiplying befr5_02 (annual frequency of beer) by bequ5_02 (usual quantity of beer)

wivo5_02: (annual volume of wine) derived by multiplying wifr5_02 (annual frequency of beer) by wiqu5_02 (usual quantity of beer)

spvo5_02: (annual volume of spirits) derived by multiplying spfr5_02 (annual frequency of beer) by spqu5_02 (usual quantity of beer)

bsvo5_02: (annual volume based on beverage specific measures) Sum of bevo5_02, wivo5_02 and spvo5_02.

Note: a quantity per drinking day can be obtained by dividing bsvo5_02 by nodd__02.

Binge drinking

bing5_02: (annual frequency of bingeing, 5+, this is approximately 70 grams of ethanol or more) bing5_02=dlnda02. (no response values reduced to 0)
Problem: 2 cases with 0 quantity and frequency but binge > 0. Correction: set binge = 0.
dlnda02
- take number of days with at least 5 glasses of any alc. beverage (in the last 12 months) (not asked if person drank during the last 30 days) => dlnda02=dlnda02b (**F71**).
- if missing: take number of days with at least 5 glasses of any alc. bev. (in the last 30 days) *12 =>dlnda02=dlnda02a (**F67**)*12.
- if missing: abstainer (dlnda02c (**F61_6**)=996 never drank alc. or dlnda02d (**F69_2**)=0 no alc. during the last 12 months) =0 => dlnda02=0.
- Problem: some persons drink more than 60 grams/day but they never report 5+ glasses! Do they drink directly from the bottle ….?