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Evaluating Alcohol Use among Russian Women at Risk for an Alcohol-Exposed Pregnancy: A Comparison of Three Measures of Alcohol Use

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Abstract

The Quick Drinking Screen (QDS) and Timeline Followback (TLFB), measures of alcohol use, have yielded similar reports of drinking with English speakers. The present study, a secondary data analyses, compared three measures of alcohol use (i.e., QDS, TLFB, and AUDIT) with Russian-speaking women. This is the first study to compare all three measures. This study replicated the findings of studies with English speakers, and demonstrated that brief screening measures (QDS, AUDIT) provide reliable summary measures of alcohol use when compared to a detailed drinking measure (TLFB). The use of brief screening measures is recommended for use with Russian women.

Keywords

Drinking assessment; Quick Drinking Screen; Timeline Followback; AUDIT; alcohol-exposed pregnancies; women; Russia

INTRODUCTION

Russia has one of the highest alcohol consumption rates in the world, including among women of childbearing age (World Health Organization [WHO], 2014). A staggering 89% of nonpregnant women drink alcohol and 65% report binge drinking in the past three months (Balachova et al., 2012). Alcohol consumption during pregnancy is associated with a wide range of devastating, costly, and long-term consequences, both for the unborn fetus and the

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family (National Institute on Alcohol Abuse and Alcoholism, 2000). High levels of risky drinking and low levels of contraceptive use among Russian women of childbearing age, coupled with minimal physician knowledge of the effects of prenatal alcohol puts Russian women at considerable risk of an alcohol-exposed pregnancy (AEP) (Balachova et al., 2012).

The present study, a secondary data analyses, used data from a parent study designed to prevent Alcohol Exposed Pregnancies (AEPs) with Russian speaking women (Balachova et al., 2013). Three different measures of alcohol use (Timeline Followback [TLFB], Quick Drinking Screen [QDS], and AUDIT) were used in the study to assess the Russian women's pre-intervention drinking. The TLFB is a psychometrically sound assessment measure of drinking that obtains estimations of a person's daily alcohol use over various temporal intervals ranging from 30 to 360 days (Agrawal, Sobell, & Sobell, 2008; Sobell & Sobell, 2003; Sobell & Sobell, 2008). Although the TLFB is used when sensitive and detailed assessments of daily alcohol use are needed (e.g., research studies), it can be very time consuming to administer. The QDS, a quantity-frequency (QF) brief screening measure, is shorter, less time-consuming, and provides several QF summary measures of alcohol use (Rehm et al., 1999; Sobell et al., 2003). Several studies with English speaking problem drinkers (Roy et al., 2008; Sobell et al., 2003) have compared the TLFB and QDS and found they yielded very similar reports of alcohol use. The data from these studies show that the QDS can be used when time or resources are limited. To date, a comparison of the QDS with the TLFB with Russian speakers has not been conducted.

The present study, a secondary data analysis, compared two alcohol use measures (QDS, TLFB) with Russian-speaking women. The study used data from a randomized controlled trial designed to prevent AEPs in Russian women (Balachova et al., 2013), and included a third alcohol use measure, the Alcohol Use Disorders Identification Test (AUDIT), in the comparative evaluation. The AUDIT, a psychometrically sound screening measure (Babor, Higgins, Saunders, & Monteiro, 2001), has 10 questions, the first three ask about QF of alcohol use. Although the AUDIT has been used in several Russian studies, this is the first comparison of the AUDIT with the TLFB and QDS. The present study compared scores on the three drinking measures over a 90-day interval prior to the interview with a nonclinical sample of heavy-drinking Russian women who were at risk of an AEP.

METHODS

Brief Study Description

The data for the present study are from a parent study (Balachova et al., 2013). The parent study upon which this paper is based was approved by the Institutional Review Boards of St. Petersburg State University (SPSU) in St. Petersburg, Russia, and the University of Oklahoma Health Sciences Center (OUHSC) in Oklahoma City, OK. Because details of the parent study have been described elsewhere (Balachova et al., 2013), only details relevant to the study in this paper are presented. Readers interested in further details are referred to the original publication.

The parent study was designed to prevent an AEP and recruited 689 non-pregnant Russian women of childbearing age (18–44) who were not practicing effective contraception and who drank alcohol at risky levels. Study participants were recruited at public women's health clinics. A two-arm randomized controlled trial compared standard Russian clinic care with a dual-focused (i.e., contraception and alcohol reduction) Brief Physician Intervention (BPI). The BPI was adapted from two evidence-based interventions designed to prevent AEPs (Fleming, Lund, Wilton, Landry, & Scheets, 2008; Floyd et al., 2007). The results of the parent study showed that participants provided reliable information about their drinking behavior over the 90 days prior to the interview (Balachova et al., 2015).

Female graduate psychology students trained and supervised by Ph.D.-level psychologists conducted face-to-face screening and assessment interviews with each participant. The assessment included demographic questions (e.g., age, education, gender, and marital status), questions about sexual intercourse with male partners, methods of contraception, and alcohol use over the 90 days prior to the interview. During the assessment interview, the three alcohol use measures were administered in the following order: (a) QDS at the beginning of the assessment; (b) AUDIT during the middle part of the assessment; and (c) TLFB at the end of the assessment. After the assessment, all participants received a gift equal to about \$25 U.S. dollars.

Participants

Russia has a well-established OB/GYN health care system in which almost all (96%) women receive free services at women's clinics (Sukhanova, 2008). Over three years (2009 through 2011), 689 women were recruited from 20 clinics in two locations in Russia (St. Petersburg, a major urban area; the Nizhny Novgorod Region, a more rural area).

Women were screened for study eligibility (i.e., at risk for an AEP) based on the following criteria: (a) of childbearing age (18–44 years old); (b) able to become pregnant, and currently not pregnant by self-report; (c) living in an area served by one of the study clinics; (d) voluntarily provided informed consent; (e) available for 12-month follow-up, and; (f) engaged in AEP risk behaviors over the 90 days prior to the interview. Risky behaviors were defined as: (a) drinking on average 8 standard drinks (SDs) per week or 4 standard drinks in one day (i.e., binge drinking), and (b) being heterosexually active (intercourse with a male partner) and using no or ineffective contraceptive methods, e.g., rhythm or withdrawal. Of over 2,000 women screened, 689 met the at-risk criteria at the assessment interview.

Measures

All study materials and measures were provided to women in Russian and were prepared using Russian project consultants (i.e., obstetricians, behavioral health experts, and Russian women). As in other cross-cultural studies (Babor et al., 1994; Room, Janca, Bennett, Schmidt, & Sartorius, 1996), to achieve good translations of English language study questionnaires and materials, a process of translation and retro translation (i.e., back translation) was followed. Bi-lingual behavioral health experts conducted the translation and

back translation procedures to ensure that the materials were culturally congruent, accurate, and would be correctly comprehended by Russian-speaking participants.

Timeline Followback (TLFB)—The TLFB is a psychometrically sound assessment method that uses a retrospective self-report calendar-based format to obtain daily drinking data about a person's alcohol use over a period ranging from 1 to 12 months (Agrawal, Sobell, & Sobell, 2008; Sobell & Sobell, 2003; Sobell & Sobell, 2008). The current study used a 90-day TLFB window. The TLFB has been used in several studies designed to prevent AEPs (reviewed in Velasquez, Ingersoll, Sobell, & Sobell, 2016). On the TLFB, alcohol use is reported using a standard drink format for each day of the target interval. While a standard drink (SD) definition was used in the present study, participants provided their answers using the metric system (milliliters).

Quick Drinking Screen (QDS)—The QDS, a brief, psychometrically sound measure for assessing alcohol use, contains three questions, including one on binge drinking (Dum et al., 2009; Roy et al., 2008; Sobell et al., 2003). The interval over which data were collected was 90 days prior to the interview. In past studies comparing the TLFB and QDS, the binge-drinking question has been worded as: *In the past xx days, how many days did you drink xx of drinks?* In the current study, the binge-drinking question was worded as *“In the past 90 days, how often did you have 4 or more drinks on one occasion?”* and provided participants with several options (e.g., daily, 4–6 times a week, 2–3 times per week, once a week, etc.). The criterion of 4 standard drinks was used as it has been evaluated epidemiologically as putting women of childbearing at risk of an AEP (Dawson, 2000; Sayal et al., 2009).

Alcohol Use Disorders Identification Test (AUDIT-10)—The Alcohol Use Disorders Identification Test (AUDIT-10), a 10-item screening measure, was developed to identify problematic alcohol consumption in primary care settings (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001; Saunders, Aasland, Babor, De La Fuente, & Grant, 1993). Scores range from 0 to 40, with 8 suggestive of an alcohol problem. Although three of the AUDIT's 10 questions specifically ask about alcohol use, and seven ask about alcohol-related consequences, the AUDIT has not generally been used as a brief screening test for alcohol use. For this study, only the first three AUDIT questions (i.e., those on the quantity and frequency of drinking) were used. Unfortunately, the AUDIT for the first three questions does not inquire about drinking during a specific period.

Data Analysis—Data for the present analysis were derived from three drinking measures: the QDS, the first 3 questions on the AUDIT, and the TLFB. The TLFB was compared with the QDS and the AUDIT separately using three variables: (a) number of drinking days per week/month (AUDIT/QDS), (b) number of drinks per drinking day, and (c) number of binge-drinking days. Relationships between pairs of measures were analyzed because this approach allows a comparison with previously published findings in the literature and because our interest was in how the individual measures performed, rather than their overall similarity. To maintain an $\alpha=0.05$ family-wise error rate, Bonferroni adjustments were made for the three variables thought to be related a priori. Thus, the individual test α level was at $\alpha=0.017$ (Holland & Copenhaver, 1988).

RESULTS

Participants

Table 1 presents demographic and drinking data for the 689 participants. On average, the women were almost 30 years old, about two-thirds were married/living together, and two-thirds had more than a high school education. About three-quarters were employed. Although one-third (32.12%) had an AUDIT score of ≥ 8 , which is suggestive of an alcohol problem (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001; Reinert & Allen, 2007), the mean (*SD*) AUDIT score was 7.0 (5.0). Participants reported that, in the 90 days before the interview, they consumed on average 3 drinks per drinking day. Although Russian women only reported drinking on average 14% of all days in the 90-day interval, 42% of those days were at binge drinking levels (i.e., ≥ 4 drinks).

Comparison of three drinking measures—Tables 2 and 3 show the means (*SD*), 2-tailed paired sample *t*-tests, and intraclass correlations (*ICCs*; *ICC* type= absolute agreement and single measure) for participants' self-reports using two different drinking measures. Table 2 compares the 90-day TLFB with the first three questions on the AUDIT, and Table 3 compares the 90-day TLFB with the three QDS questions.

There was no difference between reports using the QDS and TLFB for the number of drinks per drinking day (Table 3). Other paired sample *t*-tests resulted in significant differences between the two drinking measures (Tables 2 and 3). Because the sample size was very large, the absolute differences between all but one of the variables (QDS vs. TLFB, # of binge-drinking days) were unlikely to be clinically significant or meaningful (Meehl, 1978).

For the two variables in Table 3 that were significantly different, the QDS had higher values than the TLFB. In Table 2, the TLFB had higher values than the AUDIT for two of the three variables. The *ICCs* for the drinking variables in Tables 2 and 3 were all significant ($p = .000$), with moderately high values ranging between .60 and .73 for the TLFB and AUDIT and .45 and .62 for the QDS and TLFB.

DISCUSSION

This study examined the reliability and absolute differences of the TLFB with two brief summary drinking measures, the QDS and the three drinking questions on the AUDIT, among a nonclinical sample of heavy drinking women who were at risk of an AEP. With regard to the QDS and TLFB, the results parallel those of three previous studies in clinical and nonclinical samples of drinkers in the U. S. (Dum, Pickren, Sobell, & Sobell, 2008; Roy et al., 2008; Sobell et al., 2003). Besides extending the results to Russian women, the major difference between the current study and previous studies is that the current study compared the TLFB with the AUDIT.

Although the differences were statistically significant for five of the six variables in Tables 2 and 3, the absolute differences between the two drinking measures, with one exception, were relatively small. As can be seen in Tables 2 and 3, it is highly unlikely that these differences would be clinically meaningful (Meehl, 1978). The large sample size provided for a very sensitive analysis of absolute differences. The *ICC* values, important indications of

reliability, were all highly significant. Interestingly, these findings parallel those of the three previous studies comparing the TLFB and QDS with U.S. drinkers (Dum et al., 2009; Roy et al., 2008; Sobell et al., 2003).

The number of binge drinking days for the QDS and TLFB warrants further discussion (Table 3). Although the absolute difference was 2.5 days (7.80 vs. 5.30), this finding may stem from the QDS in the present study having eight categorical options, rather than asking women to report the number of days as has been the case in all past comparisons of these two drinking measures. That is, the larger absolute difference in the estimated numbers of binge-drinking days may be an artifact of the QDS requiring respondents to subjectively estimate their “average” pattern, rather than recalling specific drinking days. Because binge drinking is highly prevalent in Russia (Balachova et al., 2012; Bobak, McKee, Rose, & Marmot, 1999), it is also possible that cultural norms influence self-perceptions and self-reports about “average” binge drinking. Further research is needed to determine whether self-reports about “average” patterns are more affected by social norms and self-perceptions than are detailed daily consumption reports. In addition, the differences between the TLFB and the AUDIT drinking questions may be an artifact of the AUDIT questions having no specific time interval whereas the TLFB asked about the 90 days prior to the interview.

This study had three strengths: (a) a very large sample size, (b) cooperative Russian health care providers that made this study possible, and (c) cross-cultural replication of women at risk of AEP, using different measures to evaluate self-reports of alcohol use. There were also some limitations. First, although participants’ self-reports were gathered using procedures known to enhance the accuracy of reports, including informing participants of confidentiality and using clinically trained interviewers (Maisto, McKay, & Connors, 1990), the self-reports were not corroborated with another data source. However, as noted earlier, a previous study with these 689 women showed that, using the TLFB, they provided reliable information about their drinking behavior over the 90 days prior to the interview (Balachova et al., 2015). In addition, several studies have shown that women’s self-reports of their pre-pregnancy alcohol use are reliable (Alvik, Haldorsen, Groholt, & Lindemann, 2006; Fox, Sexton, Hebel, & Thompson, 1989). Second, while the administration order of the three drinking measures was not counterbalanced during the assessment interview, it is highly unlikely that the QDS and AUDIT questions would appear to participants as redundant with the TLFB, as the measures ask the key questions differently. Further, in the AUDIT, the three binge-drinking questions were embedded among 10 questions. Finally, while the binge-drinking question on the QDS and the AUDIT specifically asks about how many drinks are consumed (i.e., 4 drinks), the TLFB only asks participants to report how many drinks they consumed on each day in the target interval. However, the difference in the way the binge-drinking questions were worded in all three measures, including the open-ended responses for the TLFB, might explain the observed differences for this variable. Lastly, the results of this study are limited to women at the present time.

In summary, if a detailed drinking measure such as the TLFB cannot be used because of time or other constraints, two brief alcohol use screening measures, the QDS and AUDIT, can be used to screen women whose level of alcohol use puts them at risk for an AEP. Although neither the QDS nor the AUDIT can yield detailed drinking information (e.g.,

patterns, day-to-day variability), these might be preferred measures (a) for screening participants for initial study eligibility, particularly by phone, (b) in women's health or primary care settings, and (c) when clients are unwilling to participate in lengthy follow-up interviews. When detailed drinking data are not needed or cannot be obtained, the AUDIT and QDS can provide reliable summary measures of drinking among women. Evaluating alcohol use among young Russian women is particularly important because of the high risk of AEP among such individuals. Routine use of a brief alcohol screening measure, such as the QDS or the first three AUDIT questions, in clinical settings can improve the identification of women at risk of an AEP.

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References

- Agrawal S, , Sobell MB, , Sobell LC. The Timeline Followback: A scientifically and clinically useful tool for assessing substance use. In: Belli RF, Stafford FP, , Alwin DF, editors Calendar and time diary methods in life course research Beverly Hills, CA: Sage; 2008 5768
- Alvik A, Haldorsen T, Groholt B, Lindemann R. Alcohol consumption before and during pregnancy comparing concurrent and retrospective reports. *Alcohol Clin Exp Res*. 2006; 30(3):510–515. DOI: 10.1111/j.1530-0277.2006.00055.x [PubMed: 16499492]
- Babor TF, Grant M, Acuda W, Burns FH, Campillo C, Del Boca FK, McRee B. A randomized clinical trial of brief interventions in primary health care: Summary of a WHO project. *Addiction*. 1994; 89:657–660. [PubMed: 8069168]
- Babor TF, , Higgins-Biddle JC, , Saunders JB, , MG M. AUDIT: The Alcohol Use Disorders Identification Test: Guidelines for use in primary care 2. World Health Organization; Geneva, Switzerland: 2001
- Balachova TN, Bonner B, Chaffin M, Bard D, Isurina G, Tsvetkova L, Volkova E. Women's alcohol consumption and risk for alcohol-exposed pregnancies in Russia. *Addiction*. 2012; 107(1):109–117. DOI: 10.1111/j.1360-0443.2011.03569.x [PubMed: 21752144]
- Balachova TN, Bonner BL, Chaffin M, I Isurina GL, Shapkaitz V, Tsvetkova LA, Knowlton N. Brief FASD prevention intervention: physicians' skills demonstrated in a clinical trial in Russia. *Addiction Science & Clinical Practice*. 2013; 8(1–10)doi: 10.1186/1940-0640-8-1
- Balachova TN, Sobell LC, Agrawal S, Isurina GL, Tsvetkova LA, Volkova E, Bohora SB. Using a single binge drinking question to identify Russian women at risk for an alcohol-exposed pregnancy. *Addictive Behaviors*. 2015; 46:53–57. DOI: 10.1016/j.addbeh.2015.03.003 [PubMed: 25800361]
- Bobak M, McKee M, Rose R, Marmot M. Alcohol consumption in a national sample of the Russian population. *Addiction*. 1999; 94(6):857–866. [PubMed: 10665075]

- Dawson DA. U.S. low-risk drinking guidelines: An examination of four alternatives. *Alcoholism, Clinical and Experimental Research*. 2000; 24(12):1820–1829.
- Dum M, Pickren J, Sobell LC, Sobell MB. Comparing the BDI-II and the PHQ-9 with outpatient substance abusers. *Addictive Behaviors*. 2008; 33(2):381–387. [PubMed: 17964079]
- Dum M, Sobell LC, Sobell MB, Heinecke N, Voluse A, Johnson K. A Quick Drinking Screen for identifying women at risk for an alcohol-exposed pregnancy. *Addictive Behaviors*. 2009; 34(9): 714–716. DOI: 10.1016/j.addbeh.2009.04.001 [PubMed: 19406583]
- Fleming MF, Lund MR, Wilton G, Landry M, Scheets D. The Healthy Moms Study: The efficacy of brief alcohol intervention in postpartum women. *Alcoholism: Clinical and Experimental Research*. 2008; 32(9):1600–1606. DOI: 10.1111/j.1530-0277.2008.00738.x
- Floyd RL, Sobell M, Velasquez MM, Ingersoll K, Nettleman M, Sobell L. Project CHOICES Efficacy Study Group. Preventing alcohol-exposed pregnancies: A randomized controlled trial. *Am J Prev Med*. 2007; 32(1):1–10. [PubMed: 17218187]
- Fox NL, Sexton M, Hebel JR, Thompson B. The reliability of self-reports of smoking and alcohol consumption by pregnant women. *Addictive Behaviors*. 1989; 14:187–195. [PubMed: 2658483]
- Holland BS, Copenhaver MD. Improved Bonferroni-type multiple testing procedures. *Psychological Bulletin*. 1988; 104:145–149.
- Maisto SA, McKay JR, Connors GJ. Self-report issues in substance abuse: State of the art and future directions. *Behavioral Assessment*. 1990; 12:117–134.
- Meehl PE. Theoretical risks and tabular asterisks: Sir Karl, Sir, Ronald, and the slow progress of soft psychology. *J Consult Clin Psychol*. 1978; 46(4):806–834.
- National Institute on Alcohol Abuse and Alcoholism Tenth Special Report to the U.S. Congress on Alcohol and Health Washington, DC: U.S. Government Printing Office; 2000
- Rehm J, Greenfield TK, Walsh G, Xie X, Robson L, Single E. Assessment methods for alcohol consumption, prevalence of high risk drinking and harm: a sensitivity analysis. *Int J Epidemiol*. 1999; 28(2):219–224. [PubMed: 10342682]
- Reinert DF, Allen JP. The Alcohol Use Disorders Identification Test: An update of research findings. *Alcoholism Clinical and Experimental Research*. 2007; 31(2):185–199.
- Room R, Janca A, Bennett LA, Schmidt L, Sartorius N. WHO cross-cultural applicability research on diagnosis and assessment of substance use disorders: An overview of methods and selected results. *Addiction*. 1996; 91:199–220. [PubMed: 8835277]
- Roy M, Dum M, Sobell LC, Sobell MB, Simco ER, Manor H, Palmerio R. Comparison of the Quick Drinking Screen and the alcohol Timeline Followback with outpatient alcohol abusers. *Subst Use Misuse*. 2008; 43(14):2116–2123. DOI: 10.1080/10826080802347586 [PubMed: 18825590]
- Saunders JB, Aasland OG, Babor TF, De La Fuente JR, Grant M. Development of the Alcohol Use Disorders Identification Test (AUDIT): Who collaborative project on early detection of persons with harmful alcohol consumption—II. *Addiction*. 1993; 88:791–804. [PubMed: 8329970]
- Sayal K, Heron J, Golding J, Alati R, Smith GD, Gray R, Emond A. Binge pattern of alcohol consumption during pregnancy and childhood mental health outcomes: longitudinal population-based study. *Pediatrics*. 2009; 123(2):e289–296. DOI: 10.1542/peds.2008-1861 [PubMed: 19171582]
- Sobell LC, Agrawal S, Sobell MB, Leo GI, Young LJ, Cunningham JA, Simco ER. Comparison of a Quick Drinking Screen with the Timeline Followback for individuals with alcohol problems. *J Stud Alcohol*. 2003; 64:858–861. [PubMed: 14743950]
- Sobell LC, , Sobell MB. Alcohol consumption measures. In: Allen JP, , Wilson V, editors *Assessing alcohol problems 2*. Rockville, MD: National Institute on Alcohol Abuse and Alcoholism; 2003 7599
- Sobell LC, , Sobell MB. Alcohol Timeline Followback (TLFB). In: Rush J, First MB, , Blacker D, editors *Handbook of psychiatric measures (Second edition)* Washington, DC: American Psychiatric Association; 2008 466468
- Sukhanova LP. Статистика родовспоможения как фактор обеспечения качества акушерской и перинатальной помощи в России. Statistics of obstetric aid as a factor of providing quality of obstetric and perinatal care in Russia 2008 Retrived from <http://vestnik.mednet.ru/content/view/47/30>

Velasquez MM, Ingersoll K, Sobell MB, Sobell LC. Women and Drinking: Preventing Alcohol-Exposed Pregnancies. *Advances in Psychotherapy – Evidence-Based Practice*: Vol. 2016; 34:80.

World Health Organization [WHO]. Russian Federation. 2014 Retrieved from http://www.who.int/substance_abuse/publications/global_alcohol_report/profiles/rus.pdf?ua=1

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Table 1Demographic and drinking variables for 689 Russian women.^a

Variable	Mean (SD) or %
Age (years)	28.80 (6.55)
Education	
Less than high school	6.5%
High school	29.8%
Greater than high school	63.7%
Caucasian	100.0%
Marital status ^b	
Single	23.1%
Married/living together	68.2%
Divorced/widowed/separated	8.7%
Employed	73.3%
AUDIT score ^b	32.1%
AUDIT score ^b	7.0 (5.0)
% days drinking during the 90 days prior to the interview (TLFB)	13.91 (11.60)
Mean number of standard drinks (SDs) ^c per drinking day during the 90 days prior to interview (TLFB)	3.23 (1.32)
% of all days drinking that are binge drinking (≥ 4 SDs) (TLFB) ^c	41.47 (27.68)

Note:

^aReprinted with permission from Elsevier^bAUDIT = Alcohol Use Disorders Identification Test (scores range from 0 to 40), *n* = 688 participants completed the AUDIT, one was missing.^cOne standard drink (SD) = 14 g absolute ethanol.

Table 2

Means (*SDs*), Intraclass Correlations (*ICCs*), and Paired Sample *t*-Tests Comparing AUDIT and Timeline Followback (TLFB) Reports for 90 Days Prior to the Interview for 689 Russian Women.

Variable ^a	Means (<i>SD</i>)		<i>t</i> -test (<i>p</i> value) ^{b,c}	<i>ICC</i> (<i>p</i> value) ^{c,d}
	AUDIT	TLFB		
Drinking days per month	5.22 (4.55)	4.18 (3.55)	8.00 (.000) ^e	.66 (.000) ^e
Drinks (<i>SDs</i>) per drinking day	2.98 (1.57)	3.21 (1.21)	-4.84 (.000) ^e	.60 (.000) ^e
Number of binge days (4 <i>SDs</i>)	4.64 (7.41)	5.30 (7.61)	-3.17 (.000) ^e	.73 (.000) ^e

^a 1 standard drink (SD) drink = 14 g absolute alcohol.

^b *t* values are two-tailed paired sample *t* tests.

^c Bonferroni adjustments were made for the 3 variables thought to be related a priori to maintain an $\alpha=0.05$ family-wise error rate; thus, the individual test α level was set at $\alpha=0.017$ (0.05/3).

^d *ICC* = Intraclass correlations (*ICC* type = absolute agreement and single measure).

^e Significant at $p = 0.000$ (rounded).

Table 3

Means (*SDs*), Intraclass Correlations (*ICCs*), and Paired Sample *t*-Tests Comparing Quick Drinking Screen (QDS) and Timeline Followback (TLFB) Reports for 90 Days Prior to the Interview for 689 Russian Women

Variable ^a	Means (<i>SD</i>)		<i>t</i> -test (<i>p</i> value) ^{b,c}	<i>ICC</i> (<i>p</i> value) ^{c,d}
	QDS	TLFB		
Drinking days per week ^e	1.85 (1.04)	1.09 (0.85)	20.65 (.000) ^f	0.60 (.000) ^f
Drinks (<i>SDs</i>) per drinking day ^g	3.22 (1.59)	3.23 (1.32)	−0.21(.834)	.62 (.000)
Number of binge days (4 <i>SDs</i>)	7.80 (9.60)	5.30 (7.61)	8.98 (.000) ^f	.45 (.000) ^f

^a 1 standard drink (SD) drink = 14 g absolute alcohol.

^b *t* values are two-tailed paired sample *t* tests.

^c Bonferroni adjustments were made for the 3 variables thought to be related a priori to maintain an $\alpha=0.05$ family-wise error rate; thus, the individual test α level was set at $\alpha=0.017$ (0.05/3).

^d *ICC* = Intraclass correlations (*ICC* type = absolute agreement and single measure).

^e *n* = 560; 129 participants did not drink weekly and thus could not answer this question and were excluded.

^f Significant at *p* = 0.000 (rounded).

^g *n* = 688