

Motivation to change drinking habits: development of a new instrument

Jannet M. de Jonge*, Dick P. H. Barelids**, Gerard M. Schippers*** and Cas P.D.R. Schaap**

Several international questionnaires measuring motivation for change have been translated into Dutch and are currently used in substance abuse treatment. The Readiness to Change Questionnaire (RCQ) is the best-known questionnaire, but critical appraisals can be made. We developed a new questionnaire that can be used together with the RCQ: the Motivation for Change Questionnaire (MfCQ). Data on the MfCQ were collected in three samples varying in drinking habits: patients from a substance abuse treatment centre ($N = 118$), people from the general community ($N = 71$), and psychology freshman ($N = 139$). Follow-up data of drinking habits in the general community sample were collected after six months. Three scales were constructed: 'intention to change', 'outcome expectations', and 'self-efficacy'. Preliminary findings support the reliability and validity of the MfCQ. (*Netherlands Journal of Psychology*, 65, 102-111.)

Keywords: alcohol; motivation for change; self-efficacy; outcome expectancies; questionnaire development; reliability; validity

Motivation to change instruments have been studied extensively (for review see Carey, Pur-nine, Maisto & Carey, 1999). Three such instruments have been translated into Dutch and their psychometric properties are, in general, satisfactory (e.g. DeFuentes-Merillas, De Jong & Schippers, 2002; De Jonge, Schaap & Schippers 2002; De Weert-Oene, de Jong, Schippers & Schrijvers, 2002). The Readiness to Change Questionnaire (Heather, Rollnick & Bell, 1993) is frequently

used in substance abuse treatment in the Netherlands and Flanders to assess motivation to change drinking behaviour. The RCQ is based on the Stages of Change (SoC) model (Prochaska, DiClemente & Norcross, 1992) and has three different subscales: pre-contemplation (not thinking about behaviour change), contemplation (seriously thinking about behaviour change) and action (actual changing). The RCQ is used to assign people to a stage of change based on their highest score on one of the three subscales.

Two critical appraisals can be made with regard to using the RCQ in substance abuse treatment. Firstly, using the RCQ for repeated measures of motivation to change drinking behaviour is complicated. The SoC model describes the change process and assumes that people move

*Verslavingszorg Noord Nederland

**Department of Psychology, University of Groningen

*** Amsterdam Institute for Addiction Research

Correspondence to: Jannet M. de Jonge, Verslavingszorg Noord Nederland, Leonard Springerlaan 27, PO Box 8003, 9702 KA Groningen, the Netherlands, e-mail: j.dejonge@vnn.nl

Received 14 August 2008; revision accepted 20 June 2009.

from one stage to the other. The SoC model has been criticised for that reason (see for example Kraft, Sutton, & McCreath-Reynolds, 1999). Assignment to a stage of change is based on the highest score of a person on a scale corresponding to a stage of change. This means that the height of the scores on the other scales is largely neglected in the assignment process. Moreover, in follow-up studies, it might, for instance, be possible that a patient obtains the highest scores on the same scale on both measurements, and is therefore assigned to the same stage of change on both occasions, whereas the height of highest scores might be substantially different. This could result in assigning a person to the same stage twice, whereas his/her level of motivation is substantially different.

Secondly, describing motivation for change based on the SoC model (on which the RCQ is based) might be too limited (Davidson, 1998). For instance, social cognition theory represents motivation for change in a model containing self-efficacy concerning specified goals, outcome expectancies, perceived environmental barriers, and advantages (Bandura, 2000). This model was found useful in describing the regulation of motivation and action when changing drinking behaviour (Blume, Lostutter, Schmalings, & Marlatt, 2003). In summary, whereas the RCQ appears to be a useful tool in assigning people to one of the stages of change, the usefulness of the RCQ in follow-up studies as well as in accurately describing motivation seems limited. We therefore decided to develop a new questionnaire to measure motivation for change of drinking behaviour, which could be used alongside the RCQ in substance abuse treatment. The work of Schwarzer (1992) inspired us in choosing the items for the new questionnaire. Motivation should be represented as intention to change, self-efficacy, outcome expectancies and as a perception of threats of the current situation. In the present article we present the first psychometric properties of this new Motivation for Change Questionnaire (MfCQ).

Method

Participants and procedure

Data were obtained from a sample consisting of 118 patients from a substance abuse treatment centre who were primarily diagnosed as having alcohol problems (Table 1). These patients were asked to fill in a package of questionnaires. In addition, a counsellor rated the patient's motivation to change his drinking behaviour using a scale ranging from 0 (not at all motivated) to 10 (highly motivated) for each patient. The estimated number of glasses of alcohol consumed weekly for this sample (in the past 30 days) was 49.1 ($SD = 26.6$). For validation purposes, two additional samples were collected. The first of the

additional samples consisted of 71 people from the general community (Table 1). They responded to advertisements placed in a local newspaper asking people to participate in a minimal alcohol intervention (the Drinker's Check Up; Miller, Sovereign, & Krege, 1988). They had to fill in a package of questionnaires and were asked to fill in the same questionnaires six months later. This sample differed in severity of alcohol problems compared with the patient sample: the alcohol problems in this general community sample were less severe than in the patient sample. The estimated mean number of glasses of alcohol consumed weekly in the past 30 days for this sample was 29.4 ($SD = 17.6$). The second of the additional samples consists of 139 psychology freshmen (Table 1). During a lecture, these students were asked to voluntarily fill in a package of questionnaires. This student sample differed from both the patient sample and the general community sample regarding the severity of alcohol problems: the alcohol problems were less severe than in the other samples. The estimated mean number of glasses of alcohol consumed weekly in the past 30 days was 16.7 ($SD = 10.7$).

Measures

Motivation for Change Questionnaire: For the construction of a general questionnaire that measures motivation for change, we collected items from several existing questionnaires assessing motivation for change, self-efficacy towards change of health behaviour outcome expectancies of changing health behaviour. The questionnaires were: the University of Rhode Island Change Assessment (URICA; McConaughy, Prochaska & Velicer, 1983), several questionnaires assessing self-efficacy to change (Dijkstra et al., 1998; Schwarzer, 1992), and questionnaires assessing outcome expectancy of change (Cunningham et al., 1997; Dijkstra et al., 1998; Rollnick et al., 1996b). If no Dutch version of these questionnaires was available, they were translated into Dutch by a professional translator. To narrow the number of suitable items, the overlapping items in the item pool were removed. In a next step, suitable items were selected for the different aspects of motivation for change: 12 items were selected to represent readiness to change, 6 items were selected to represent self-efficacy, 6 items to represent positive outcome expectancies of change, 6 items to represent negative outcome expectancies of change, and 4 items to represent negative consequences of the current situation. These 34 items were judged by a group of experienced researchers, and subjected to the following criteria: they should be clear and unambiguous statements, use no more than 20 words per item, should not be negatively stated, and should cover one topic per item. Items were changed according to these criteria, and judges' comments. It was decided to

Table 1		The patient sample and the two additional samples.		
		Patients (N = 118)	General community (N = 71)	Student (N = 139)
Gender	Male	84	36	37
	Female	33	35	102
Age		43.4 ^a (SD = 8.9)	48.0 ^b (SD = 13.9)	20.8 ^c (SD = 4.2)
Marital status	Married	34	26	2
	Living together	3	6	10
	Divorced	37	4	-
	Single	40	31	127
	Widowed	1	1	-
Employment	Fulltime	30	23	3
	Part-time	10	24	75
	Unemployed	61	18	57
	Retired	11	1	-
	On benefit	4	4	-
Education	Lower	39	2	-
	Middle	48	26	1
	Higher	7	15	33
	University	23	28	105
	Mean number of glasses	49.1 ^a (SD = 26.6)	29.4 ^b (SD = 17.6)	16.7 ^c (SD = 10.7)

Note: means with different subscripts differ significantly between columns.

consistently use the term 'behaviour' instead of 'problems' in the items. The preliminary Motivation for Change Questionnaire (MfCQ) therefore consists of 34 items. Each item is rated on a 5-point Likert-type scale, ranging from 1 = 'strongly disagree' to 5 = 'strongly agree'.

In addition to the MfCQ, the following questionnaires were used:

The Alcohol Use Disorders Identification Test (AUDIT): This is a 10-item questionnaire with questions covering alcohol consumption (1-3), dependence symptoms (4-6) and abnormal drinking behavior (7-10; Barbor, De la Fuente, Saunders & Grant, 1992). Each question is scored between 0 and 4. The higher the score, the more problematic the pattern of alcohol consumption is likely to be. In this study the authors split the second question: 'How many drinks containing alcohol do you

have on a typical day when you're drinking' into two questions asking about a typical weekday and a typical day during the weekend. Furthermore, the original AUDIT items ask about alcohol use during the last year. In the present study participants were asked about alcohol use during the last 30 days.

The Readiness to Change Questionnaire (RCQ): The RCQ is a 12-item instrument for measuring the 'stages of change' reached by an excessive drinker of alcohol. Each of the three stages of change measured by the RCQ (pre-contemplation, contemplation, action) is represented by four items. In calculating scale scores, response points for items run from -2 (strongly disagree) to +2 (strongly agree; Heather et al., 1993). The internal consistencies (Cronbach's alpha) of the scales pre-contemplation, contemplation and action in the Dutch version range from 0.68 to 0.81 (DeFuentes-Merrillas et al., 2002).

Visual Analogue Scales (VAS): Visual analogue scales were used assessing the importance of change, the motivation for change and the self-efficacy to fulfil change behaviour (scores ranging from 0 to 10). The zeros on these VAS scales correspond to 'not important', 'not motivated' or 'I am not able to change', respectively, whereas the tens correspond to 'very important', 'highly motivated' and 'I am able to change', respectively.

Global Clinical Impression (GCI): A global clinical impression was provided by the clinicians in the patient sample, rating a patient's motivation to change his/her drinking behaviour on a scale ranging from 0 to 10 (a zero means 'this patient is not motivated to change his/her drinking behaviour', and a ten means 'this patient is highly motivated to change his/her drinking behaviour').

Results

The structure of the MfCQ was examined in the patient sample (N = 118), using a principal com-

ponents analysis with Varimax rotation. Three criteria were used to determine the number of factors to be retained: the Scree test, the Kaiser criterion (eigenvalues > 1) and psychological interpretation. A total of eight factors with an eigenvalue > 1 were found (eigenvalues of 10.13, 3.91, 2.91, 1.67, 1.24, 1.17 and 1.01), explaining 68.92% of the total variance. However, the Scree test suggested a solution with three or four factors, and psychological interpretation suggested that a solution with three factors would fit best. These three factors, with eigenvalues of 10.13, 3.91 and 2.90, explained 49.86% of the total variance. The Varimax rotated factors are listed in Table 2. It was decided to retain all items with an absolute factor loading ≥ 0.40. Items with a factor loading ≥ 0.40 on two factors were, however, removed if the difference between the absolute factor loadings was < 0.10.

There are 20 items with factor loadings higher than 0.40 on the first factor. Two of these items loaded higher than 0.40 on the third factor as well. These two items (items 24 and 30) were removed from further analyses (differences between factor loadings were < 0.10). The remaining 18 items contained items referring to both problem recognition and positive behaviour or thoughts concerning change (items 1, 2, 3, 4, 7, 9, 10, 16, 17, 18, 20, 23, 25, 26, 27, 29, 31 and 32). This factor was therefore labelled 'intention to change'. The seven items with primary loadings on the second factor refer to negative outcome expectancies of change (items 6, 12, 13, 15, 22, 28 and 33). This second factor was labelled 'negative outcome expectancies'. Finally, the items 5, 11, 14, 19, 21 and 34 had factor loadings higher than 0.40 on the third factor, One item (item 14) had a comparably high loading on both the third and the second factor, and was therefore removed. The remaining five items refer to the level of self-efficacy and were therefore labelled 'self-efficacy'. Subsequently, internal consistencies (Cronbach's alpha) were computed for the resulting three scales: intention to change α = 0.98, negative outcome expectancies α = 0.80, and self-efficacy α = 0.65.

Item	Component		
	1	2	3
17	0.85		
16	0.83		
20	0.81		
9	0.80		

<i>Item</i>	<i>Component</i>			
	1	2	3	
26	0.80			
1	0.80			
10	0.76			
23	0.76			
31	0.73			
27	0.72			
4	0.71			
25	0.69			
32	0.69			
29	0.67			
7	0.67			
24	0.54		0.48	
2	0.54			
30	0.51		-0.42	
3	0.51			
18	0.46			
13		0.79	0.40	
28		0.78		
22		0.70		
15		0.65		
33		0.62		
12		0.58		
6		0.55		
8		0.33		
11			0.80	
19			0.68	
21			0.63	
34			0.56	
14		-0.41	0.47	
5			-0.44	

Next, the intercorrelations between the scales were computed (patient sample, $N = 118$). The intercorrelations were generally very low: intention to change and negative outcome expectancies $r = -0.10$, $p = ns$, self-efficacy and the readiness to change $r = 0.04$, $p = ns$, and self-efficacy and negative outcome expectancies $r = -0.12$, $p = ns$. These results support the independence of the three constructs.

To further examine the validity of the scales, Pearson correlations were computed between all three MfCQ scales and the VAS scales for importance, motivation and self-efficacy, the global clinical impression and the scales of the Readiness to Change (RCQ; see Table 3). The correlations between the intention to change scale and the VAS scales for importance and motivation were satisfactory ($r = 0.74$ and $r = 0.79$), whereas the correlation between the intention to change scale and the global clinical impression was low and non-significant ($r = -0.10$). The correlation between the MfCQ self-efficacy scale and the VAS scale for self-efficacy was moderate ($r = 0.39$). The

correlations between the MfCQ intention to change scale and the pre-contemplation, contemplation and action scales of the RCQ were all moderate ($r = -0.32$, $r = 0.40$ and $r = 0.58$).

The validity of the questionnaire (MfCQ) was further examined by comparing the mean MfCQ scale scores for three samples: the patient sample, the general community sample and the student sample. A MANOVA revealed that the three samples differed significantly in their mean sum scores on the intention to change scale [$F = 361.42$, $p < 0.001$], the negative outcome expectancies scale [$F = 46.86$, $p < 0.001$], and the self-efficacy scale [$F = 59.91$, $p < 0.001$]. Table 4 shows that the three groups differ significantly from one another with regard to the scales intention to change and negative outcome expectancies. The mean sum score on the self-efficacy scale was significantly higher in the student sample compared with the other two samples, which did not differ significantly with regard to self-efficacy.

Table 3 Pearson correlations between the MfCQ scales and importance, motivation, self-efficacy, global clinical impression and the RCQ scales in the patient sample ($N = 118$).

Scales	Scales		
	Intention to change	Negative outcome expectancies	Self-efficacy
Importance	0.74**	-0.14	-0.01
Motivation	0.80**	-0.19*	0.00
Self-efficacy	0.38**	-0.32**	0.39**
Global clinical impression	-0.11	-0.10	-0.01
Pre-contemplation	-0.32**	0.28**	0.31**
Contemplation	0.40**	0.05	-0.15
Action	0.58**	-0.21*	-0.10

* $p < 0.05$, ** $p < 0.01$.

Table 4 Mean scale scores of the MfCQ for the three samples.

Sample	N	Intention to change		Negative outcome expectancies		Self-efficacy	
		M	SD	M	SD	M	SD
Patient	118	77.2 _a	12.2	18.0 _a	5.9	15.1 _a	4.2
General community	71	53.4 _b	15.5	15.5 _b	3.7	15.3 _a	3.0
Students	139	33.4 _c	10.8	12.1 _c	3.5	19.3 _b	2.8

Note: Means that do not share the same subscript differ significantly at $p < 0.05$.

In the general population sample data were collected about drinking habits six months after the first assessment. The difference between the numbers of glasses of alcohol consumed weekly at the first and second assessment was computed. Based on these differences three subgroups in the general population sample were formed: a group that reduced their number of glasses of alcohol ($N = 21$), a group did not change their number of glasses ($N = 26$) and a group that increased their number of glasses ($N = 5$). A MANOVA was conducted comparing the mean scores on the scales of the MfCQ (intention, negative outcome expectancies and self-efficacy) and the RCQ (pre-contemplation, contemplation and action). There were significant differences on the intention to change scale of the MfCQ [$F = 4.3, p < 0.01$] and the action scale of the RCQ [$F = 3.3, p < 0.05$]: the mean scores on the intention to change scale and the action scale were higher in the group that reduced their number of glasses of alcohol ($M = 60.0, SD = 15.0; M = 0.7, SD = 4.6$) than in the group that did not change their drinking habits ($M = 47.7, SD = 4.0; M = -2.9, SD = 3.7$).

Discussion

The present paper describes a first study in the development of a new questionnaire, the Motivation for Change Questionnaire (MfCQ). The MfCQ is intended to measure motivation to change drinking habits. The first results with the MfCQ in a patient sample are promising. Principal components analyses revealed a three-factor solution: intention to change, negative outcome expectancies and self-efficacy. The general intention to change factor is in accordance with Budd and Rollnick (1996). Reliability analysis showed that the internal consistencies of the MfCQ in the patient sample were excellent to good for all three scales. Intercorrelations between the three scales were generally low, thus supporting their independence.

The construct validity of the MfCQ was further investigated by examining the relations between the MfCQ scales and the RCQ and VAS scales in the patient sample. The positive relations between the intention to change scale and the VAS scales importance and motivation, and the RCQ scales contemplation and action supported its construct validity. The clinician's global impression of a patient's motivation for change, however, related very poorly to intention to change. It might be that the clinicians unwittingly assessed motivation for treatment rather than motivation for change. The validity of the self-efficacy scale was supported by the positive relation with the VAS self-efficacy. The predictive validity of the MfCQ was investigated using follow-up data about drinking habits after six months in a general community sample. The intention to change scale differentiated two groups of participants in a six-month follow-up:

participants who reduced the number of glasses of alcohol consumed and participants who did not change the number of glasses of alcohol consumed. The same was true for the RCQ action scale. Unfortunately, the other MfCQ scales did not differentiate the follow-up outcome groups. The outcome groups, however, were small and our findings could have been caused by a lack of statistical power (Cohen, 1992). In addition, the sample that was used to examine the predictive validity of the MfCQ was a non-patient sample, with less severe alcohol problems than the population for which the MfCQ was initially intended.

The present study can be criticised on a number of aspects. A first aspect is the construction of the questionnaire. We used modification of existing items for the construction of the questionnaire. The items inspired by the work of Schwarzer (1992) and the social cognition theory (Bandura, 2000). Motivation represented by the stages of change is too limited. It should be represented by self-efficacy and outcome expectancies as well. The items were judged by experienced researchers. We did not study the suitability of the items in a target sample. This may have influenced the understandability of the questionnaire in our study. A second limitation is the use of self-report data about use of alcohol. O'Farrell and Maisto (1987) reviewed the utility of self-report and biological measures of alcohol consumption and found that self-reports of alcohol use were invalid when, for instance, patients had a positive alcohol concentration at the time of the assessment, or when there was minimal contact with the patient. This means that the self-reported use of alcohol in the present study should be taken with great caution. A third limitation is that we only collected data concerning motivation for change of drinking habits. We did not collect data about motivation for change of other health behaviours. The 'social cognition' models (Bandura, 2000) refer to all kinds of risky health behaviours. The generalisability of our findings with the MfCQ to motivation for change of other behaviour is limited. A fourth limitation is the absence of repeated measurements for the MfCQ. Therefore, we were unable to examine changes in motivation and/or the stability of the MfCQ.

In this study, we have presented the first psychometric results of a new motivation for change questionnaire. In future research, we plan on collecting repeated measures of both the MfCQ and the RCQ in order to study the usability of the MfCQ supplementary to the RCQ. Furthermore we want to adapt the MfCQ for use with other health behaviours, and try to replicate the factor structure of the MfCQ. In addition, the validity of the MfCQ should be further examined, by using (1) instruments that are more specifically targeted at the three scales that emerged from the initial item pool, and (2) collateral reports and biological measures. Finally, future

research on the MfCQ should aim at examining the change processes in different health behaviours, with and without formal treatment, to

study motivation for change and the prediction of outcome.

References

- Babor, T. F., De la Fuente, J. R., Saunders, J., & Grant, M. (1992). *AUDIT The Alcohol Use Disorder Identification Test: Guidelines for use in Primary Health Care*. World Health Organisation, Geneva.
- Bandura, A. (2000). Health promotion from the perspective of social cognitive theory. In: P. Norman & C. Abraham (Eds.). *Understanding and changing health behaviour: from health beliefs to self-regulation* (pp. 299-339). Harwood Academic Publishers, Amsterdam.
- Blume, A. R., Lostutter, T. W., Schmalting, K. B., & Marlatt, G. A. (2003). Beliefs About Drinking Behavior Predicts Drinking Consequences. *Journal of Psychoactive Drugs*, 35, 395-399.
- Budd, R. J., & Rollnick, S. (1996). The structure of the Readiness to Change Questionnaire: A test of Prochaska & DiClemente's transtheoretical model. *British Journal of Health Psychology*, 1, 365-376.
- Carey, K. B., Purnine, D. M., Maisto, S. A., & Carey, M. P. (1999). Assessing readiness to change substance abuse: A critical review of instruments. *Clinical Psychology: Science and Practice*, 6, 245-266.
- Cunningham, J. A., Sobell, L. C., Gavin, D. R., Sobell, M. B., & Breslin, F. C. (1997). Assessing motivation for change: Preliminary development and evaluation of a scale measuring the costs and benefits of changing alcohol or drug use. *Psychology of Addictive Behaviors*, 11, 107-114.
- Davidson, R. (1998). The transtheoretical model: A critical overview. In: W. R. Miller & N. Heather (Eds.). *Treating addictive behaviors* (pp. 25-38). Plenum Press, New York.
- De Jonge, J. M., Schaap, C. P. D. R., & Schippers, G. M. (2002). Motivatie voor verandering: een Nederlandse versie van de University of Rhode Island Change Assessment (URICA.NL). *Diagnostiek-wijzer*, 5, 114-122.
- DeFuentes-Merillas, L., De Jong, C. A. J., & Schippers, G. M. (2002). Reliability and validity of the Dutch version of the Readiness To Change Questionnaire. *Alcohol and Alcoholism*, 37, 93-99.
- De Weert-Van Oene, G. H., De Jong, C. A. J., Schippers, G. M., & Schrijvers, A. J. P. (2002). Motivation for Treatment in substance dependent patients: psychometric evaluation of the TCU-Motivation for Treatment Scales. *European Addiction Research*, 8, 2-9.
- Dijkstra, A., Roijackers, J., & De Vries, H. (1998). Smokers in four stages of readiness to change. *Addictive Behaviors*, 23, 339-350.
- Heather, N., Rollnick, S., & Bell, A. (1993). Predictive validity of the Readiness to Change Questionnaire. *Addiction*, 88, 1667-1677.
- Kraft, P., Sutton, S. R., & McCreath-Reynolds, H. (1999). The transtheoretical model of behaviour change: Are the stages qualitatively different? *Psychology and Health*, 14, 433-450.
- McConaughy, E. N., Prochaska, J. O., & Velicer, W. F. (1983). Stages of change in psychotherapy: Measurement and sample profiles. *Psychotherapy: Theory, Research and Practice*, 20, 368-375.
- Miller, W. R., Sovereign, D. G., & Kreege, B. (1988). Motivational interviewing: II. The Drinkers's Check-Up As a preventive intervention. *Behavioural Psychotherapy*, 16, 251-268.
- O' Farrell, T., & Maisto, S. A. (1987). The utility of self-report and biological measures of alcohol consumption in alcoholism treatment outcome studies. *Advances in Behaviour Research and Therapy*, 9, 91-125.
- Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist*, 47, 1102-1114.
- Rollnick, S., Morgan, M., & Heather, N. (1996) The development of a brief scale to measure outcome expectations of reduced consumption among excessive drinkers. *Addictive Behaviors*, 21, 377-387.
- Schwarzer, R. (1992). Self-efficacy in the adoption and maintenance of health behaviors: Theoretical approaches and a new model. In: R. Schwarzer (ed.) *Self-efficacy: Thought control of action* (pp. 217-243). Hemisphere Publishing Corp, Washington.

Appendix: Motivation for Change Questionnaire

1	I am planning to change my drinking habits.
2	Most people who drink like I do will eventually die of it.
3	If I try hard enough, I will be able to change my drinking habits.
4	The people around me will approve if I change my drinking habits.
5	I am happy with the way I am drinking at the moment.
6	I will feel like an outsider if I change my drinking habits.
7	My current drinking habits are dangerous.
8*	I am considering the pros and cons of changing my drinking habits.
9	I am actively working on changing my drinking habits.
10	I will be more active if I change my drinking habits.
11	I am able to resist the urge to drink.
12	I would rather cope with the consequences of my drinking than try to change.
13	I will feel frustrated if I change my drinking habits.
14*	I am able to keep off alcohol even when I see others drinking.
15	My image will suffer if I change my drinking habits.
16	I am really working hard to change my drinking habits.
17	I will feel better about myself if I change my drinking habits.
18	It might be worth changing my drinking habits.
19	Even if I am feeling down, I am able to change my drinking habits.
20	I am doing my best to change my drinking habits.
21	There is little chance of my losing control over my drinking.
22	I will feel uncomfortable when I am with other people if I change my drinking habits.
23	Other people think that I should do something about my drinking.
24*	I believe I am able to change my drinking habits.
25	I am changing my drinking habits.
26	I will regain some self-respect if I change my drinking habits.
27	I've been considering changing my drinking habits.
28	I will get depressed if I change my drinking habits.
29	I will have fewer problems with the people around me if I change my drinking habits.
30*	Changing my drinking habits would be a waste of time.
31	My health will improve if I change my drinking habits.
32	If I continue drinking, I will probably have a lot of problems.

33	I will feel stressed out if I change my drinking habits.
34	I find it easy to stick to my plan to change my drinking habits.

Note: * these items were removed from the analyses.
