

Supplementary material

This supplementary material elaborates upon the theory of the working alliance, the data collection process, the operationalization of the theory, the index construction and the dependent variable of the analyses in the main paper. Furthermore, it is illustrated how the use of an interaction term in a logistic regression can be used to investigate the interaction between a context and a mechanism in realistic evaluation.

Description and operationalization of the theory

As stated in the main paper, the working alliance consists of three interconnected dimensions: Goals, tasks, and bonds. According to working alliance theory, the best outcomes are achieved, if the change agent and the change seeker agree on the desired outcome/goals. Furthermore, it is of importance that the change seeker understands the purpose of engaging in activities.

Tasks refer to the activities the change seeker has to do, or participate in, as part of the change process. The change seeker should regard the tasks undertaken as effective and relevant for achieving the goals. Here, it is important that the change seeker is actively involved in choosing and planning the activities, and that the wishes of the change seeker have been taken into consideration.

Finally, bonds refer to the positive relationship between the change seeker and the change agent. Bonds consist of mutual trust, acceptance, and belief in good intentions of change agent, on the part of the change seeker.

The operationalization, of the working alliance theory into questions included in the survey, can be seen in the supplementary table 1 below:

Supplementary table 1: Questions measuring the working alliance

Working alliance
Goals
1: <i>To what degree do you wish to get back into work or education?</i>
2: <i>To what degree have you understood the purpose of the active measures you have participated in?</i>
Tasks
3: <i>To what degree has your caseworker actively included you when planning your activities?</i>
4: <i>To what degree do you feel that your caseworker has taken your wishes into consideration when choosing your active measures?</i>
5: <i>To what degree do you think that the labor market measures you have participated in have taken your needs for getting back into work education as a starting point?</i>
Bonds
6: <i>How do you evaluate the collaboration between you and your caseworker in relation to getting you back into to work or education?</i>
7: <i>To what degree are you of the opinion that your caseworker is trying to help you to get back into work or education?</i>
8: <i>How satisfied are you with your caseworker?</i>

* The questions have been translated from Danish to English

As can be seen in the supplementary table 1, the “goals” dimension of the working alliance theory was measured by two questions. The first question asked to which degree the individual wants to get a job or start education. In the context of Danish employment policy, the predefined goal for the target group is getting a job or starting in ordinary education. The question measures to which extent the respondents agree with the overall goal. The second question asked the respondents to which degree they understood the purpose of participating in the measures. As stated in the working alliance theory, the change seeker should agree with both the overall goal (becoming self-supporting), and understand the purpose of participating in the activities.

The “tasks” dimension was measured by three questions. In accordance with the theory, the first of these questions asked to which degree the citizen thought that he or she had been actively involved in planning the measures to participate in. The second question asked to which degree the citizen felt that her or his wishes had been taken into account when choosing the active measures. The third question asked to which degree the citizen assessed that the active measures had his or her needs as a starting point.

The “bonds” dimension was measured by three questions. The first question asked the respondents to rate the quality of the collaboration with the caseworker. The second question asked to which degree they felt that their caseworker was trying to help them. The final question was a general question about satisfaction with their caseworker.

Data collection and data description

The survey data was collected from august 1st 2016 to august 25th 2016, using the software program SurveyXact. Unemployment benefit recipients received an email with an invitation and a personalized link. Social assistance recipients and sickness benefit recipients were interviewed by telephone by the author, or 4 student assistants, and guided through the questionnaire verbally. The telephone interview was chosen as the collection method for the weaker groups, because a large proportion of the citizens in this group have concentration and reading difficulties. The total number of respondents was 507 and the overall response rate was 25.1.

Based on reliability analyses showing that the variables were suitable for index construction (Cronbachs alpha=0.89), an additive index (component variable) ranging from 8-56 was constructed from the eight items (questions), measuring the working alliance (mean= 44.2, minimum=11, maximum=56). Low values indicated a very weak/negative alliance, and high values indicated a very strong alliance. For use in logistic regression, this total measure was recoded into three categories of equal size:

- 11-26 = Weak alliance

- 27-41 = Medium alliance
- 42-56 = Strong alliance

The dependent variable used in the analysis is a variable measuring ‘self-assessed progression’. The wording of the question was: *“Overall, to which degree do you believe the measures of the jobcentre has brought you closer to getting a job or starting in education”*. The answers were also measured on the aforementioned seven point ordinal scale. For the analysis, the variable was recoded into two categories: 1-4 = Low/medium progression and 5-7 = High progression. All analyses including the logistic regression have been carried out using Stata 14.

Investigating the interaction between the mechanism and age (context)

This section illustrates how the influence of the mechanism on the outcome, depending on the age (context), can be investigated. In other words, we investigate the interaction between the mechanism and the individual-level context of age. This could have been investigated by generating a new variable, by multiplying the mechanism variable and the binary categorical age variable, and including this variable in a regression model. Using this approach, we would find the “average effect” of the mechanism and age. In realistic evaluation, we are, however, not very interested in the average effects of the mechanism and the context. To see how the context (age) affects the influence of the mechanism, we might instead generate a number of dummy variables (coded as “0” or “1”) based on the mechanism variable and the context variable. Here, it is essential to exhaust every possible combination between the two variables. Doing this for the mechanism variable and the context variable (age in two categories) we get six mutually exclusive dummy variables:

1. 18-40 year-olds with a strongly activated mechanism
2. 18-40 year-olds with a medium activated mechanism
3. 18-40 year-olds with a weakly activated mechanism
4. 41+ year-olds with a strongly activated mechanism
5. 41+ year-olds with a medium activated mechanism

6. 41+ year-olds with a weakly activated mechanism

In the following, we run a logistic regression model similar to the one employed in the main paper. It contains all the other independent variables in the logistic regression in table 3 in the main article - with the exception of the original mechanism variable and the categorical age variable. Instead, the six dummy variables described above are added to the model. The results are shown in the supplementary table 2.

Supplementary table 2: Logistic regression with the outcome (self-assessed progression) as the dependent variable. Interaction between the mechanism and age (context) using dummy variables.

	Odds ratio	Std. error	P-value
Expectations about future employment			
Does not expect employment	.1886338	.1323499	0.017
Expects to enter into later than two years	.8363834	.5320643	0.779
Expects to enter into employment in one to two years	.5150671	.3474366	0.325
Expects to enter into employment in six to twelve months	.9738867	.3980839	0.948
Expects to enter into employment in less than six months	Ref.	Ref.	Ref.
Benefit recipiency in number of weeks	.9980519	.0018109	0.283
Highest completed education			
Secondary school	Ref.	Ref.	Ref.
Vocational education	.901437	.3751422	0.803
High school or higher education	.8872522	.3675616	0.773
The severity of the citizen's self-assessed problem measured on a scale from 7-49. High values= few problems	1.043586	.0210743	0.035
Gender. Ref= males	1.105779	.3678372	0.762
Support from friends and family. Measured on a scale from 2-14. High values=high degree of support	1.03681	.0491898	0.446
Interaction between age (in two categories) and the mechanism			
Respondents above the age of 41 with a weakly activated mechanism	Ref.	Ref.	Ref.
18-40 year-olds with a strongly activated mechanism	3.208503	1.574381	0.018
18-40 year-olds with a medium activated mechanism	.4097117	.2446789	0.135
18-40 year-olds with a weakly activated mechanism	Na	Na	Na
41+ year-olds with a medium activated mechanism	.0867731	.09695	0.029
41+ year-olds with a strongly activated mechanism	2.714465	1.17066	0.021
Constant	.1949301	.183645	0.083

Number of observations = 223, LR $\chi^2(16) = 57.93$, Prob > $\chi^2 = 0.0000$, Pseudo $R^2 = 0.1891$

When using this approach to investigating the interaction between mechanism and context, one should exclude the dummy variable intend to use as the reference category. In the regression above, the reference category for the dummy variables are the respondents above the age of 41 with a weakly

activated mechanism. From the table above, we find statistically significant effects from three of the dummy variables; 18-40 year-olds with a strongly activated mechanism, 41+ year-olds with a medium activated mechanism and 41+ year-olds with a strongly activated mechanism compared to the reference group (respondents above the age of 41 with a weakly activated mechanism). Both the 18-40 year-olds with a strongly activated mechanism and the 41+ year-olds with a strongly activated mechanism have *higher* odds of achieving the outcome compared to the reference group (3.2 and 2.7 higher odds respectively). We thereby gain some support for our hypothesis that a strongly activated mechanism produces better outcomes than a weakly activated mechanism. Surprisingly, we see that the 41+ year-olds with a medium activated mechanism have *lower* odds of achieving the outcome than people in the same age group with a weakly activated mechanism. The point to be made here is that the approach outlined and illustrated above can be used to investigate the interaction between contexts and mechanisms in realistic evaluations. It can be regarded as an alternative to predicting the marginal effects, as was done in the main paper.