

Article

Using self-persuasion to change public service motivation and policy alienation: lessons from a survey experiment

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This adventure is made possible by generations of searchers strictly adherent to a simple set of rules. Test ideas by experiments and observations. Build on those ideas that pass the test. Reject the ones that fail. Follow the evidence wherever it leads, and question everything. Accept these terms, and the cosmos is yours. - Neil deGrasse Tyson, COSMOS: A Spacetime Odyssey

Abstract

Self-persuasion interventions have been successfully used in psychological research to effectuate individual attitude change. This article examines the application of low intensity self-persuasion interventions in public administration by using it to influence public service motivation (PSM) and the policy alienation dimension of societal meaningfulness. Our first hypothesis is that pro-referent low intensity self-persuasion treatments will increase reported levels of public service motivation. Hypothesis 2a considers that counter-attitudinal low intensity self-persuasion will decrease levels of reported societal meaningfulness. Hypothesis 2b refers to pro-attitudinal low intensity self-persuasion will increase levels of reported societal meaningfulness. Hypothesis 3 considers that pro- and counter-attitudinal self-persuasion is more effective when compliance is high. We test our hypotheses using two survey experiments amongst 680 health care professionals. Our results show that concept specific self-persuasion changes reported levels of PSM and policy alienation. Specifically, this research indicates that PSM can be made more salient by low intensity self-persuasion, although effects are small. Regarding policy alienation, counter-attitudinal self-persuasion lowers levels of societal meaningfulness, but in situations of no compliance, it can backfire and heighten societal meaningfulness instead. In general, our findings suggest that self-persuasion can be used in public administration research provided that researchers take into account the nature of the targeted variables and the compliance methods necessary and possible.

Keywords: Self-persuasion, survey experiment, public service motivation, policy alienation, experimental public administration, behavioural public administration

Introduction

Scholars indicate that experimental public administration (PA) is lagging behind fields such as psychology and economy (Van de Walle & Van Ryzin, 2011). Nevertheless, experiments offer the promise of answering causal questions (Morton & Williams, 2009; Margetts, 2011). Therefore, various scholars have called for more experimental research in PA (Bozeman & Scott, 1992; Ostrom, 2007; Wright & Grant, 2010; Perry, 2012; Anderson & Edwards, 2014). Currently, the survey experiment is the most used experimental method in PA (Grimmelikhuijsen & Bouwman, 2016). A survey experiment systematically varies one or more elements of a survey across subjects and measures the effect of this variation on one or more outcomes (Marsden & Wright, 2010; p. 838). Survey experiments can provide the researcher not only with internal but also with external validity, as they include a sufficient amount of control while occurring within a real world context (Gaines, Kuklinksi & Quirk, 2007). Survey experiments however remain limited in their methodologies (Grimmelikhuijsen & Bouwman, 2016).

Moreover, there is advocacy that PA can benefit from the application of psychological theory (Tummers, Olsen, Jilke & Grimmelikhuijsen, 2016). Renewed attention for this finds expression in the field of behavioural public administration. Behavioural public administration has been

described as 'the interdisciplinary analysis of public administration from the micro-perspective of individual behaviour and attitudes by drawing upon recent advances in our understanding of the underlying psychology and behaviour of individuals and groups' (Grimmelikhuijsen, Jilke, Olsen & Tummers, 2016; p. 2). However, despite the successful application of psychological theory in PA experiments (Bretschneider & Straussman, 1992; Oberfield, 2010; Weibel, Rost & Osterloh, 2010; Marvel, 2015), the development of psychological tools to use in experimental PA has not been analysed extensively.

We address this by testing two low intensity self-persuasion interventions that are assumed to effectuate individual attitude change of public professionals. By doing this, we build on Wright and Grant's (2010) observations about the potential of self-persuasion in PA. Also, psychological research has proved self-persuasion interventions to be effective (Aronson, 1999). The effects of self-persuasion can be best explained through examples. For example, Nel, Helmreich and Aronson (1969) asked people opposed to the use of marijuana to deliver a speech, recorded on audiotape, advocating marijuana use. The participants were led to believe that this speech would be showed to a persuadable audience. The result was that people who participated, softened their negative attitudes towards marijuana use. Another experiment, that has now become classic, is

that of Elms (1966), who asked smokers to persuade a friend to stop smoking. He found that the persuaders were eventually more averse towards cigarettes than the friends they were trying to persuade. The application of self-persuasion has already led to some successful studies in PA (Bellé, 2013; 2014). We expand on these developments by generating knowledge about the use of low intensity self-persuasion interventions in a survey experiment by manipulating two concepts which are typical to public administration, but different in nature.

First, we focus on public service motivation (PSM). PSM concerns the motivation that induces people to contribute to society (Perry & Hondeghem, 2008). Academics have called for inclusion of the experimental method in PSM research to reduce endogeneity (Wright & Grant 2010; Moynihan et al., 2013; Perry & Vandenabeele, 2015) and answer questions about the stable/dynamic nature of public service motivation (Bellé, 2013; Wright & Grant, 2010; Vogel & Kroll, 2016; Pedersen, 2015). Theoretical and empirical advances have been made that suppose that PSM can be activated (Wright & Grant, 2010; Bellé, 2013; Pedersen, 2015). This research investigates if activation can occur through low intensity self-persuasion.

Second, we concentrate on policy alienation. Policy alienation occurs when an individual has a general cognitive state of psychological disconnection from the policy program being

implemented (Tummers, 2009; Loyens, 2014). An example of this are police officers who feel uncomfortable with implementing a policy which dictates illegally exploited workers, who refuse to file a complaint against their bosses, to be arrested. More specifically, we research societal meaningfulness, a dimension of policy alienation. Societal meaningfulness concerns the individual perception towards the added value of a policy towards society (Tummers, 2009). Societal meaningfulness is context-sensitive, specific and can be considered an attitude.

Current literature on policy alienation is dominated by studies based on cross-sectional data or interviews. In fact, policy alienation so far knows no experimental work (Tummers, 2016). We use policy alienation to determine to what extent counter-attitudinal and pro-attitudinal self-persuasion interventions have an effect. Moreover, we examine the assumption of forced compliance which is at the basis of counter-attitudinal self-persuasion (Collins & Hoyt, 1972). Forced compliance entails that subjects comply with the treatment as meant by the researcher because they are induced to, for example by rewards (Festinger, 1957). In this research, we examine the notion of forced compliance, in a real-world public administration context where people cannot always be practically or ethically be induced to comply.

As a result, we do not only add to methodological self-persuasion theory, but also answer conceptual experimental calls. This leads to the following research question:

To what extent do concept specific low intensity self-persuasion interventions in survey experiments influence reported levels of public service motivation and policy alienation, considering the effect of compliance for the latter?

We start with a theoretical exploration of self-persuasion, public service motivation, policy alienation and forced compliance, leading to our hypotheses. Secondly, the methodology, including the data collection and case, the Diagnosis Related Groups (DRG) policy, is described. Thirdly, we present the results. Fourthly, we discuss the meaning of our results for self-persuasion, public service motivation and policy alienation theory and we give practical advice for researchers and practitioners. We conclude with a careful consideration of our limitations and directions for future research.

Theoretical framework

In this section we lay the theoretical foundation for the application of self-persuasion on public service motivation and policy alienation, including its relationship with forced compliance. We also present our hypotheses and conceptual models.

Self-persuasion

Attitude change is a core concept of continuous importance in social psychology (Bohner & Dickel, 2011). Attitude change can alter behaviour, and persuasion can lead to attitude change (Vogel, Bohner & Wanke, 2002). Attitudes are evaluations of an object of thought (Bohner & Dickel, 2011). These objects of thoughts can range from the mundane to the abstract, including things, people, groups and ideas. Social psychology research has showed the effectiveness of self-persuasion interventions on attitude change (Aronson, 1999). Self-persuasion entails 'placing people in situations where they are motivated to persuade themselves to change their own attitudes or behavior' (Aronson, 1999; p. 875).

Self-persuasion interventions often induce greater effects than other-persuasion interventions, because individuals tend to trust their own beliefs more than those of other people (Aronson, 1999). There are multiple theoretical explanations for the effect of self-persuasion, such as self-perception theory (Bem, 1967; 1965), self-determination theory (Vallerand & Ratelle, 2004), and theory about self-expectations (Aronson, 1992). However, the effect of self-persuasion is mostly connected to cognitive dissonance theory (Aronson, 1999; Festinger, 1957).

The theory on cognitive dissonance was developed by Festinger (1957), through a participant observation study of a cult, which

believed an apocalypse was coming (Festinger, Riecken & Schachter, 1956). When the apocalypse did not happen, fringe members were inclined to believe they had made fools of themselves but committed members were more likely to interpret the remaining existence of Earth a result of their faithfulness. The premise of this is that people do not deal with inconsistent cognitions very well. More specifically, when a person has conflicting cognitions, it induces tension because it threatens the individual's self-concept of being rational and decent (Festinger, 1957). This tension has drive-like traits and must be reduced (Cooper, 2007). Changing attitudes or refusing attitude change are ways to achieve this.

There are number of conditions that must be met for cognitive dissonance to occur (Cooper, 2007). Firstly, one needs to believe that the statements or behaviours have consequences. For example, Goethals and Cooper (1975) showed that subjects only changed their attitudes if they were being informed unwanted consequences would occur. Secondly, these consequences need to be foreseeable (Brehm & Jones, 1970). In other words, if subjects are told about the consequences after, instead of during the treatment, the effect diminishes. Thirdly, the dissonance needs to occur in a situation of voluntary participation. Linder, Cooper and Jones (1967) showed that the higher the financial incentive, the lower the attitude change. This happens because in the case of the incentive, the participants attribute the

incentive as the reason for their behaviour ('I did it for the money'), instead themselves. Therefore, no cognitive dissonance occurs. Fourthly, a person needs to feel committed to the behaviours. This commitment occurs when a person is for instance publicly identified with the statements (Carlsmith, Collins & Helmreich, 1966).

Public Service Motivation

Public service motivation is a type of motivation inextricably connected to the field of public administration. According to (Vandenabeele, 2007; p. 549) PSM entails 'the belief, values and attitudes that go beyond self-interest and organizational interest, that concern the interest of a larger political entity and that motivate individuals to act accordingly whenever appropriate'. PSM has been related to work outcomes, ranging from attitudinal concepts such as job satisfaction and organizational commitment (Naff & Crum, 1999; Vandenabeele, 2009), to more behavioural concepts such as individual performance (Andersen, Heinesen & Pedersen, 2014; Bellé, 2014), or absenteeism (Koumenta, 2015). Moreover, employees high in public service motivation are less likely to resist change (Wright, Christensen & Isett, 2013), and less likely to show organizationally deviant behaviour (Koumenta, 2015).

Following Wright and Grant (2010), Bellé (2013) and Pedersen (2015), we use a self-persuasion intervention to activate public service motivation. The literature

concerning PSM activation is relatively new (Wright & Grant, 2010; Pedersen, 2015), but relates to theories about identity saliency and value activation (Stryker & Burke, 2000; Verplanken & Holland, 2002). Identity saliency encompasses that individuals have multiple identities, which can be made more salient by external factors (Hogg, Terry & White, 1995). This saliency however depends on an internal hierarchy of identities. An example is that one may choose to work in the weekend, while another might spend more time with their children, although both might have a 'parent' role identity. We suppose that we can artificially make PSM more salient. We base this on value activation theory, as values are closely related to motivation (Schwartz, 1987; 1990). In fact, Verplanken and Holland (2002; p.436) explain that 'values may acquire motivational properties by making up part of the self' and more PSM related, Vandenabeele (2007) states that public service motivated behaviour refers to the realization of certain institutional values.

Value activation entails that values need to be activated in order to influence behaviours or judgements (Verplanken & Holland, 2002). Activation occurs automatically in situations in which these values are the primary focus. For example, in a discussion about the legalization of abortion, pro-choice and pro-life related values are the main discussion points and are automatically activated. We expect that self-persuasion can activate public service motivation in the same manner: by inducing attention to highly PSM related objects or situations. We refer to this as is as 'pro-referent' treatments. Therefore, we hypothesize the following:

H1: Pro-referent low intensity self-persuasion treatments will increase reported levels of public service motivation.

These relationships are shown graphically in figure 1.

Figure 1: Conceptual model of the relationship between self-persuasion and public service motivation



Policy alienation (societal meaningfulness)

Public service workers can have opinions about the policies they work with (Kelly, 1994). Negative opinions can result in identification problems (Tummers, 2016). Policy alienation captures these identification problems as it refers to a general cognitive state of psychological disconnection from the policy program being implemented (Tummers, 2009; p.2). Policy alienation can have negative consequences, ranging from reduced willingness to implement policies (Tummers, 2011), and reduced organizational commitment (Van der Voet, Steijn & Kuipers, 2016) to less behavioural support (Tummers, Bekkers & Van Thiel, 2014) and reduced psychological wellbeing (Thunman, 2013).

Policy alienation is a highly context-sensitive concept that consists out of two dimensions: powerlessness and meaningfulness (Loyens, 2014). Powerlessness refers to a person not being in charge of the events in their life (Seeman, 1957). Meaninglessness is the inability to understand the relationship of a policy's contribution to a larger purpose (Tummers, 2009). In other words, the individual is not per se against the goal of a policy, but does not see how the policy contributes to achieving that goal. We focus on meaningfulness because out of the two dimensions this has the greatest effects (Tummers, 2012; Thomann, 2015). Meaninglessness can apply on to clients or

society. In this research we focus on societal meaningfulness, because of its specific relationship to the PA context (Tummers, 2011).

Societal meaningfulness is very suitable for self-persuasion interventions because it can be considered an attitude towards a specific policy (Tummers, 2011). Indeed, it is an evaluation (meaninglessness) of an object of thought (added value for society) (Bohner & Dickel, 2011). Attitudes can be manipulated by counter-attitudinal advocacy (Aronson, 1999). Counter-attitudinal advocacy implies inducing people to try and convince others of the rightness of a position that differs from their own beliefs. As stated above, self-persuasion studies have shown that when subjects are offered minimal rewards, people seek additional justification for the position they advocated. They accomplish attitude change by persuading themselves that the advocated position is not that far from their own beliefs after all. Hence, we hypothesize the following:

H2a: Counter-attitudinal low intensity self-persuasion will decrease levels of reported societal meaningfulness.

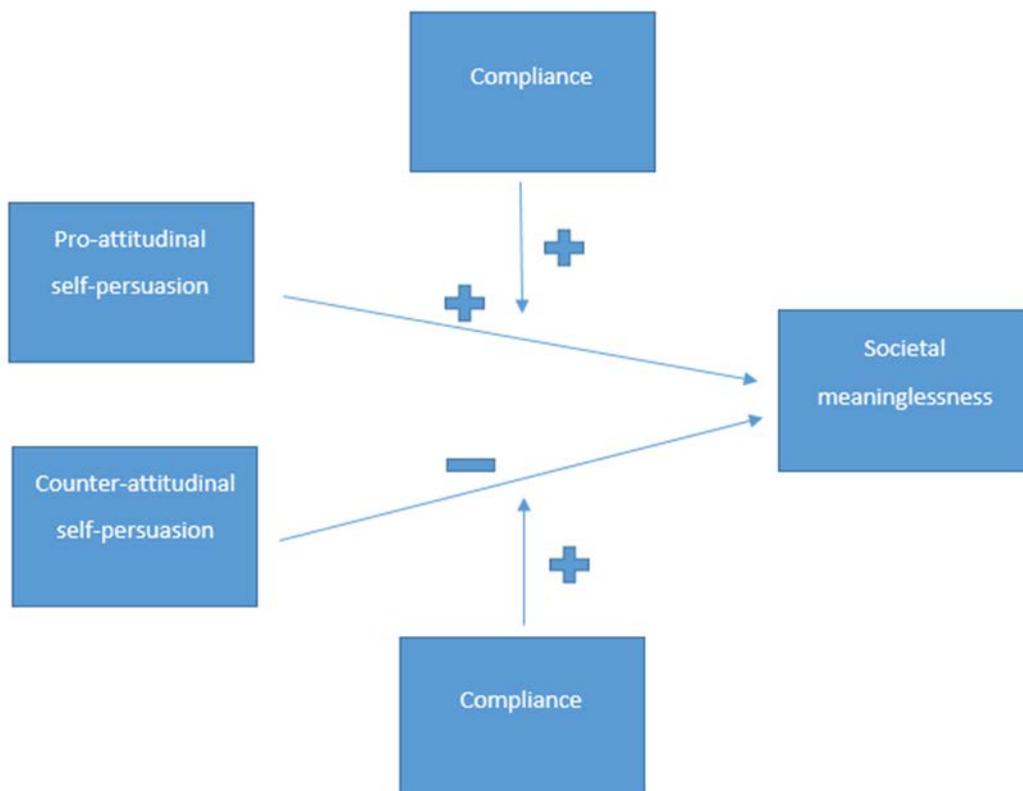
H2b: Pro-attitudinal low intensity self-persuasion will increase levels of reported societal meaningfulness.

Furthermore, we argue that these effects are dependent on the extent to which compliance is occurring. This is related to

inconsistencies in literature about cognitive dissonance. For example, Festinger et al.'s (1956) early work revealed that cognitive dissonance can lead to refusal of attitude change amongst people with strong opinions. However, many other self-persuasion studies concluded counter-attitudinal self-persuasion interventions are effective (for an overview of some, see Aronson, 1999). Thus, different studies demonstrate that cognitive dissonance leads to attitude change as well as attitude consistency. The differences between these studies can be explained by compliance.

More specifically, cognitive dissonance and self-persuasion studies are based on the notion of forced compliance (Collins & Hoyt, 1972). Forced compliance entails inducing compliance through rewards, treats, punishment (Festinger, 1957) or authority (see for instance Milgram, 1963 for a study about obedience in a laboratory). In public administration, it can be ethically and practically unfeasible to use these inducements (Margetts, 2011). Imagine for example a policy maker trying to reach thousands of public professionals in multiple organisations or in our study, asking subjects politely to give a positive account of a policy which they find meaningless. In other words,

Figure 2: Conceptual model of the relationships between pro-attitudinal & counter-attitudinal self-persuasion, compliance and societal meaningfulness



in a real world context people cannot always ethically and practically be forced to comply. This leads to the possibility of deviance if people are motivated to hold correct attitudes or maintain psychological consistency (Wegener, Petty, Smoak & Fabrigar, 2004). Therefore we present hypothesis three:

H3: Pro- and counter-attitudinal self-persuasion is more effective when compliance is high.

The described relationships are shown in figure 2.

Method

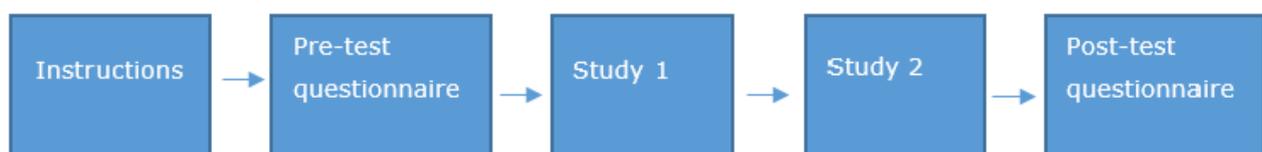
Here, we describe the methodology of the experiment in detail. First, we discuss the participants (mental health care professionals) and procedure (two experiments in a survey). Second, we describe the case, the DRG policy. Third, we describe the experimental section. Fourth, our measurements, public service motivation, societal meaningfulness, compliance and our control variables are elaborated on and the validation procedure is shown.

Participants and procedure

We sent out a survey to 9963 members of a nationwide mental health care association in May 2016. After ten days we sent a reminder after ten days and we had received 680 surveys after another ten days. The response rate was 6.8 percent, a relatively low number (Baruch & Holtom, 2008). The gender composition of the sample was 78 percent female, which was significantly higher than the Dutch average of 72 percent in 2012 (Ngo & Brink, 2014). The mean age was 50 years ($SD = 12,40$) old. This is significantly higher than the Dutch average of 44 years old in 2012. Therefore, we cannot conclude that the sample is (fully) representative of Dutch health care professionals. We will come back to this in the limitation section below.

To test the hypotheses, we included two experiments in the survey. In both experiments respondents were randomly assigned to one of the conditions through the randomizer option in the survey software Qualtrics. The first experiment (study 1) had two conditions. The dependent variable was public service motivation. In the second experiment (study 2) we aimed to influence societal meaningfulness by involving two treatment conditions and one control condition.

Figure 3: The process during the experiment



The process during the experiment is presented in figure 3. The survey experiment started with background questions (gender, age, type of organisation etc.) that we used to check for randomization. Then general questions about the policy followed and then both experiments were subsequently presented. The text of the experiment is presented in appendix A. By presenting a question for the treatment as well as for the control groups we controlled for the confounding effect of a manipulation in general. We tried to include about the same amount of words in the control groups. Then, we measured the effect of these experiments.

Case

Because study 2 considers pro-attitudinal and counter-attitudinal treatments concerning a specific policy it is important to briefly consider the case. This survey considers the Diagnosis Related Groups (DRG) policy that was implemented under a new insurance law at the end of the former decade (Tummers, 2011; van den Berg, 2006). The DRG can be classified as a type of new public management policy. Before this law, the amount of compensation was based on the number of sessions that a mental health care specialist had with a patient. The law changed that in the way that specified a standard rate for each mental disorder on the basis of the Diagnostic and Statistical Manual of Mental Disorders (DSM) system. The DRG policy was received with a lot of criticism (see for instance van den Berg,

2006), which was observable by several demonstrations that took place and a lawsuit that was issued against the agency responsible for implementing the law. Therefore, we expect policy alienation to be high.

Experimental section

We developed two treatments based on cognitive dissonance theory. We explicated foreseeable consequences by telling subjects that their statements would be included in a presentation given to peers. A situation of high choice was created by giving subjects the choice to answer the question in the manner they saw fit, or even skip it if desired. We opted high choice by not including financial incentives. Furthermore, there was a trade-off between commitment and anonymity. We opted for anonymity to give subjects the chance to give socially undesirable answers.

For study 1 we intended to manipulate levels of reported public service motivation by inducing a state in which activation can occur (Verplanken & Holland, 2002; Pedersen, 2015). We activate PSM by letting the subjects describe a situation in which PSM is very relevant. We did this by asking subjects to describe the added value of their work for society (Wright & Grant, 2010). We expect public service motivation to be the primary focus concerning this situation. Consequently, PSM will be activated, which results in higher reported levels of public service motivation.

For study 2, we asked subjects to give a negative, positive or neutral account of the policy. The positive account is counter-attitudinal and the negative account was pro-attitudinal, as policy alienation is expected to be high. The neutral account was used as a control group. The exact interventions are included in appendix A.

Measurements

All items can be found in appendix B and all measures used 5-point Likert scales ranging from 1 (total disagree) to 5 (total agree).

Public service motivation was measured by the global measure as developed by Vandenabeele & Penning de Vries (2015) and consisted out of 4 items. An example of an item is 'I am very motivated to contribute to society'.

Societal meaninglessness was measured by a scale provided by Tummers (2012). This scale is based on the policy's original goals. An example of an item is 'Overall, I think that the DRG policy leads to more efficiency in the mental health care sector'.

We conducted confirmatory factor analyses to validate these measures. Considering the ordinal nature of the variables, we used the robust diagonally-weighted least square

estimation technique in LISREL 8.80 (Joreskog & Sorbom, 2004). The evaluation of the model fit is based on the Satorra-Bentler Scaled Chi-Square ($SB\chi^2$) in combination with the RMSEA (the 90% confident interval reported within parentheses), the CFI, the NNFI, the AVE and discriminant validity. Table 1 reports the results of the confirmatory factor analyses. The measures were a good fit and convergent validity was sufficient. In appendix B, all factor loadings on the latent construct and the weighted omega are given. Furthermore, societal meaninglessness is a multi-dimensional model, thus it is necessary to test for discriminant validity. In order to do this, we compared model fit statistics of alternative measurement models to our original model (Andersen & Gerbing, 1982). On the basis of this, we deduced discriminant validity was sufficient.

Compliance was calculated by coding all answers into the categories 'negative account', 'positive account' or 'neutral account', independently of the question that was asked. Inter-coder reliability was assessed by asking three other researchers to code 10 randomly selected items into the categories positive, negative, neutral or missing (when the normative content was

Table 1

Results of the confirmatory factor analyses

	<i>df</i>	<i>SBχ^2</i>	<i>RMSEA</i>	<i>CFI</i>	<i>NNFI</i>	<i>AVE</i>
Public Service Motivation	2	2.78(P=0,25)	0,027(0,0;0,095)	1,00	1.00	0,70
Societal meaninglessness	51	7.00(P=1.00)	0,0(0,0;0,0)	1.00	1.00	0,92

unclear or the subject refused to answer). The percentages of agreement were respectively 70, 87 and 100 percent of agreement (85,7 % on average). Following Light (1971), we calculated a weighted Cohen's kappa of 0,654 which exceeds the 0.6 minimum as suggested by Landis and Koch (1977). We see this as sufficient as Cohen's Kappa is overly conservative in the case of few categories (Strijbos, Martens, Prins & Jochems, 2006).

Control variables were also used in the studies and served as randomization checks. In study 1, concerning public service motivation, we checked randomization on the basis of gender, age, managerial function, the type of mental health care organisation (institution, independent or both), the distribution in the societal meaningfulness treatment to check for experimental cross-effects (Morton & Williams, 2009) and the type of profession (e.g. clinical psychologist/researcher). All variables were dichotomous.

In study 2 we checked for randomization based on the control variables in study one and we checked for the distribution of the public service motivation manipulation to check for experimental cross-effects (Morton & Williams, 2009). Furthermore, we added policy specific variables which concerned working with the policy (working in a DRG free organisation, working with DRG's and having administrative personnel for DRG's) and previous attitudes about the policy

(behavioural support). Behavioural support refers to the actions which employees undertake to support or resist that policy (Herscovitch & Meyer, 2002). We included this variables order to control for subject related group equality, which reduces bias concerning people with certain opinions being in certain groups.

Results

In the result section, we describe the results of study 1 and 2. First, the results of our statistical analyses are presented. Second, we assess if self-persuasion occurred by studying the answers the subjects gave. If needed, additional statistical analyses are performed. An overview of the most important results is presented in table 2.

Study 1: Manipulating public service motivation

Results of statistical analysis

We checked the sample for homogeneity amongst demographic variables that could affect public service motivation, such as gender, age and profession. In appendix C the results of all difference test between the two conditions are shown. These were all insignificant, which indicates that the groups are equal regarding these variables. This makes it unnecessary to add the background variables or the societal meaningfulness treatment as control in the subsequent analysis. The mean for PSM was 4,27 ($SD = ,68$) and shows that levels of PSM are very high.

Table 2

<i>Overview of most important statistical tests in this research</i>				
<i>Study and type of test</i>	<i>Independent variables</i>	<i>Dependent variables</i>	<i>Results</i>	<i>Means and SD</i>
<i>Study 1</i>				
ANOVA	Treatment public service motivation	Public service motivation	$F(1,399) = 2,17$; $p = ,07$	Treatment groups ($M = 4,33$, $SD = ,72$); Control group ($M = 4,22$, $SD = ,72$).
<i>Study 2</i>				
ANOVA	Original treatment – Intention to treat	Societal meaningfulness	$F(2,500) = ,055$; $p = ,947$	Negative treatment ($M = 4,16$, $SD = ,70$); Neutral treatment ($M = 4,13$, $SD = ,70$); Positive treatment ($M = 4,14$, $SD = ,77$).
ANOVA	Original treatment – excluding non-response	Societal meaningfulness	$F(2,354) = ,000$; $p = 1,00$	Negative treatment ($M = 4,20$, $SD = ,69$); Neutral treatment ($M = 4,20$, $SD = ,73$); Positive treatment ($M = 4,21$, $SD = ,71$).
ANOVA	Compliance/deviance	Societal meaningfulness	$F(1,309) = 6,786$; $p = ,010$	Deviant group ($M = 4,37$, $SD = ,70$); Compliant group ($M = 4,14$, $SD = ,70$).
Regression with interaction effect compliance and treatment	Original treatment, compliance and interaction effects (compliance x positive treatment)	Societal meaningfulness	Model 1b (original treatment, interactions and controls) provided a significant cross-interaction effect.	N.a. more information on standardized beta's can be found in table 4

A one-way ANOVA was conducted to determine the effect of self-persuasion of added value for society on the level of PSM. Significance is based on a one-tailed hypothesis, due to the one directional nature of the hypothesis (Zedd, 1999; Ruxton and Neuhauser, 2010). This result was significant $F(1, 399) = 2,17; p = ,07$ with subjects in the treatment groups reporting higher levels of public service motivation ($M = 4,33, SD = ,72$) than subjects in the control group ($M = 4,22, SD = ,72$). This corroborates hypothesis 1, although the test is only marginally significant and the effect identified is small.

Assessment of self-persuasion

To assess if pro-referent self-persuasion indeed occurred, we assessed whether our treatment led to pro-referent answers. In the control group, answers were often about the physical workplace, although some subjects also described their work-activities. Rarely did they proceed towards describing an added value for society. In the treatment groups, answers were mostly about an added value for society, although interpretations of this differed. However, most accounts were about improving the lives of clients and their surroundings. Below, we show some exemplary responses (translated from Dutch):

Subject 558 – *Supporting and giving direction to patients who cannot do it themselves at this moment, through which they can participate to society in a meaningful and complete way.*

Subject 130 – *I contribute with pleasure to the mental health of people. This has an effect on their social, societal and professional functioning and serves society directly through that.*

Subject 378 – *My work contributes to a better/healthier functioning of people privately and professionally. My work contributes to the reducing of more serious mental and physical complaints. My work contributes to reducing absenteeism and reducing hospitalizations.*

Study 2: manipulating societal meaningfulness

Results of statistical analyses

We checked the sample for homogeneity amongst demographic variables that could affect levels of societal meaningfulness, such as gender, age, working in a DRG-free organisation, having administrative personnel to deal with DRG's and behavioural support for DRG's. In appendix C the differences between the three conditions are shown. These were mostly insignificant, which indicates that the groups are equal with regard to these variables. The only significant result was type of organisation. Therefore, the type of organisation variables, independent and institution, were included in subsequent analysis. The mean of societal meaningfulness ($4,15; SD = ,72$) shows that policy alienation is indeed high.

First, we conducted an one-way ANOVA based on our original treatment. This identifies the intention to treat effect (Newell, 1992). This test was not significant $F(2,500) = ,055; p = ,947$, with a mean score of 4,16 ($SD = ,70$) for the negative treatment, a mean of 4,13 ($SD = ,70$) for the control group and a mean of 4,14 ($SD = ,77$) for the positive treatment.

Second, a one-way ANOVA was conducted to determine the effect of self-persuasion on the level of societal meaninglessness. We did this by excluding non-responses from our analysis. This result was non-significant $F(2,354) = ,000; p = 1,00$, with approximately the same scores in the group who were asked to give a negative description ($M = 4,20, SD = ,69$) and groups who were asked to give a neutral ($M = 4,20, SD = ,73$) and positive description ($M = 4,21, SD = ,71$). The subsequent regression, controlling for type of organisation also provided no significant results.

Assessment of compliance

In hypothesis 2a and 2b we expected changes in the level of societal meaninglessness due to pro-attitudinal and counter-attitudinal self-persuasion. However, we found neither effect. Therefore, we turn to our third hypothesis, which considers a greater effect of self-persuasion when subjects comply. We found that subjects often chose to give an answer not fitting the normative content of the treatment. For example, we asked subject

97 to give a neutral account of the policy, instead he said:

It does not do justice to a holistic forming of diagnosis and complexity of the person who has a psychical disease. It is a corset for the clinician with administrative overload and distrusting treatment and rules by insurance companies.

Subject 168 was asked the same. She answered:

DRG's are a puppetry of auditability in health care. They make customization and patient directed working almost impossible through which I cannot offer the help my patients need, while the costs are out of control.

Subject 297 was asked to give a positive account of the policy, but he instead chose to give the following answer:

I don't see that there is a positive contribution. It feels oppressive and I am going to quit my practice earlier because I cannot stand it anymore. The DRG's and the rules of insurance companies give me so much stress and time and energy and money that I lost the pleasure in my work. I feel controlled on all sides and a wage slave of the insurance companies and stuck between all the rules. Did I

*follow an academic education for this,
to be stalked at everything I do?*

Earlier, we explained that we coded all answers into the categories 'negative account', 'positive account' or 'neutral account', independently of the question that was asked. The comparison of the original and new coding is shown in table 3. In table 3 we can observe that many subjects did not comply and showed deviant behaviour in the neutral and positive treatment. Also, the only people who moved towards a more positive category were 5 subjects who moved from neutral to positive (3.2% of deviant group); potentially indicating that high policy alienation could be the reason for being deviant. We tested this by conducting an ANOVA with a dichotomous predictor variable for compliance (0=deviance, 1=compliance). This one-way ANOVA displays a significant result: $F(1,309) = 6,786, p = ,010$ with the deviant group ($M = 4,37, SD = ,70$) scoring higher than the compliant group ($M = 4,14, SD = ,70$). We explore this more in-depth by conducting a regression analyses using a hierarchical multiple ordinary least squares regression in

IBM SPSS Statistics 22. This method was chosen because it allowed us to add possible confounding variables (Pourhoseingholi, Baghestani and Vahedi, 2012). Results of the regression are presented in table 4 below. A correlation table of all variables in the regression is presented in appendix D.

In model 1a the effect of the dummy variables of the negative and positive treatment is calculated, leaving the neutral description as reference category. These variables exclude non-responses. We found no effects. In model 1a we added the compliance variable and the interaction for compliance x positive treatment. No interaction was added for the negative treatment, as no subjects had been deviant. Therefore, an inclusion of such a term would lead to multicollinearity problems with skewed beta's and p-values (Joreskog, 1999). Adding the interaction resulted in a significant effect of the positive treatment variable ($\beta = ,21, p \leq ,01$) and a significant effect of the interaction ($\beta = -,30, p \leq ,01$). The

Table 3

<i>Distribution of treatment and normative content across groups</i>			
	Original treatment (number/percentage)	Normative content (number/percentage)	Original amount deviant
Negative	146(38,8)	227(70,3)	0 (0%)
Neutral	119(31,7)	48(14,9)	71 (59,7%)
Positive	111(29,5)	48(14,9)	63 (56,8%)

Table 4

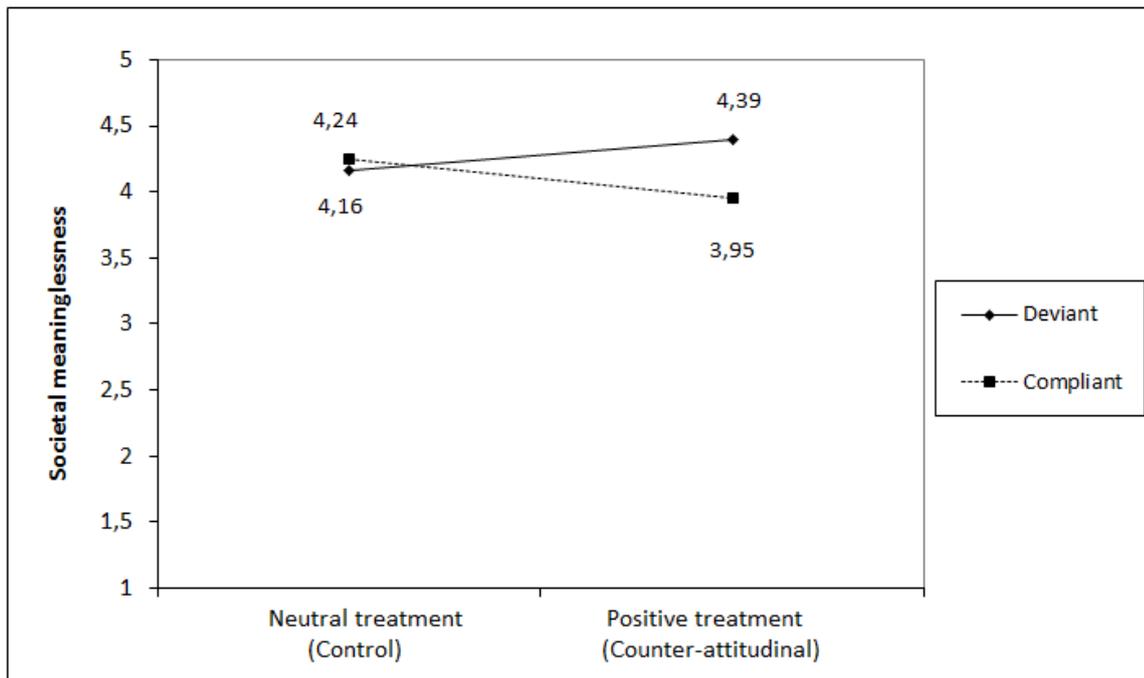
<i>Regression of recoded societal meaningfulness treatment on level of societal meaningfulness</i>			
	Model 1	Model 1a	Model 1b
	<i>Main effects treatment</i>	<i>Main effects + interaction effect compliance</i>	<i>Main effects + interaction + control</i>
<i>Control variables</i>			
Gender (ref=male)			-,08
Age			,01
Education			,06
Organisation (institution)			-,21**
Organisation (independent)			-,11
Managerial position (ref)			-,05
Compliant (ref)		-,03	,00
<i>Treatments</i>			
Compliant x Positive treatment		-,30**	-,26**
Positive treatment	,00	,21**	,16*
Negative treatment ¹	,00	,04	,02
Adjusted R Square	,00	,05	,08
R square change	,00	,06	,05
F change	,00	9,32	3,00
Significant F Change	1,00	,00	0,01
Standardized regression coefficients (β) are reported. ** Significant at the 0,01 level * Significant at the 0,05 level. For model 1 to 1b, most regression assumptions were met (no autocorrelation, no heteroscedasticity and limited multicollinearity. Errors deviated from normally distribution, indicating a non-linear model could be a better fit). Missings excluded pairwise. Note: One-tailed tests for hypothesized effects, two-tailed for control variables.			
¹ As no respondent in the negative group was deviant, this variable is treated as the compliant x negative treatment as well to avoid multicollinearity problems.			

main effect for compliance was non-significant and the negative treatment variable remained non-significant.

In model 1b, the control variables were added. This decreased the effect of the positive description slightly in size and significance ($\beta = ,16, p \leq ,05$). The interaction between the positive treatment and compliance stayed similar ($\beta = -,26, p \leq ,01$).

Moreover, the control variable organisation (institution), was also significant ($\beta = -,21, p \leq ,01$).

Figure 4 shows how to interpret the result of the interaction. This figure was made by using Excel worksheets derived from Dawson (2014). The titles of the original graph are slightly adjusted. The original

Figure 4: Interpretation of interaction of positive treatment and compliance in accordance with Dawson (2014)

graph and an elaboration on the changes are shown in appendix E.

In figure 4, we see a cross-interaction effect. This means that in the case of deviance, a positive treatment heightens reported levels of societal meaningfulness, relative to neutral treatment. In the case of compliance, a positive treatment however lowers levels of societal meaningfulness, relative to the neutral treatment.

Discussion

In this study we investigated the extent to which low intensity self-persuasion interventions in survey experiments influence reported levels of public service motivation and policy alienation. In doing so, this study makes several important theoretical and practical contributions. First,

we consider the theoretical implications for self-persuasion theory, public service motivation and policy alienation.

For self-persuasion theory, this study has two implications. First, self-persuasion is successful in activating public service motivation, although effects of low intensity interventions are small. This makes self-persuasion not only a valuable tool for attitude change but also for activation of values (Verplanken & Holland, 2002) and value-related concepts such as motivation. Second, in a real world situation, low intensity counter-attitudinal self-persuasion treatments through survey experiments can lower societal meaningfulness in cases of compliance. However, the same treatment can also heighten levels of societal meaningfulness in cases of deviance.

Concerning correcting citizen misperceptions by offering information, this has been referred to as the backfire effect (Nyhan & Reifler, 2010). The backfire effect entails that attitudes actually strengthen when external sources try to change them. We suppose that this backfire effect is also relevant concerning self-persuasion if the possibility of deviance exists.

Furthermore, this research has theoretical implications for public service motivation. We hypothesized (H1) that pro-referent low intensity self-persuasion treatments will increase reported levels of public service motivation. Our analysis revealed a moderately significant result, indicating that the intervention slightly heightens levels of reported public service motivation. We consider this result as valid, as this research can be considered an extreme case (Flyvbjerg, 2006). We regard it as extreme because the mean of PSM was already very high, leaving little room for activation. Therefore, we corroborate H1.

Moreover, this research sheds light on PSM antecedents and the effect of PSM in real world situations. Concerning antecedents, saliency theory indicates that PSM stability and change can occur through a person-environment fit (Kristof-Brown, Zimmerman & Johnson, 2005). Indeed, Serpe and Stryker (as cited in Stryker & Burke, 2000) found that when students entered university, they sought relationships in line with their salient identities. When they succeeded, self-

structures remained stable, but when they did not, changes in the saliency of their identities occurred. Thus, on the one hand low PSM saliency, can lower PSM's place in the identity hierarchy, but on the other hand PSM saliency heighten its place in identity hierarchy (Stryker & Burke, 2000). This indicates that PSM exist in a process of construction and reconstruction, being present in the individual but also being dependent on environmental circumstances at the same time. This relates the theoretical developments by Vandenaabeele (2007), connecting the individual with institutional theory.

Regarding the effect of PSM in real-world situations, we presume PSM has the most effect in situations in which PSM is salient for an individual. In fact, it can be the case that PSM, just as values, it needs to be activated in order to have influences on choices and behaviour (Verplanken & Holland, 2002) Therefore, PSM might have effects in some situations but not in others (see also Pedersen, 2015).

H2a considered counter-attitudinal low intensity self-persuasion decreasing levels of reported societal meaningfulness. We however found no effect of our original treatment on societal meaningfulness. Therefore, we reject H2a. H2b referred to pro-attitudinal low intensity self-persuasion will increase levels of reported societal meaningfulness. Study 2 demonstrated that

pro-attitudinal treatments had no effect, falsifying H2b.

Hypothesis 3 stated that pro- and counter-attitudinal self-persuasion is more effective when compliance is high. Study 2 exposed that counter-attitudinal self-persuasion can lower levels of societal meaningfulness in cases of compliance, although in cases of deviancy counter-attitudinal self-persuasion treatments can backfire. No effects were found for pro-attitudinal self-persuasion, regardless of compliance. We believe this is due to counter-attitudinal interventions producing bigger effects than their pro-attitudinal counterparts (Briñol, McCaslin & Petty, 2012). This indicates that counter-attitudinal self-persuasion can be a tool to reduce policy alienation but should be used with regards to compliance.

Furthermore, our results indicate that policy alienation is dynamic and can be changed. In fact, changes are quite big, taking into consideration that this policy has been around for about eight years and people have a preference towards pre-existing beliefs (Hart, Albarracín, Eagly, Brechan, Lindberg & Merrill, 2009). This indicates that antecedents of policy alienation can be found far after the change phase. Moreover, our results show that changes in policy alienation are not only dependent on a changing context but also on changes within the individual.

The differences between public service motivation and policy alienation can be

explained by looking at the nature of both concepts. Earlier it was discussed that public service motivation is a concept that can be made more salient or activated by self-persuasion while societal meaningfulness is an attitude that can probably be changed by self-persuasion. This means that public service motivation can be considered as far more stable than policy alienation. We consider this an explanation for the far smaller effects for public service motivation in comparison with societal meaningfulness.

Practically, the two studies have implications for researchers and practitioners. For researchers it is recommended to examine the targeted attitudes at hand before trying to change them and determining the amount of forced compliance that is necessary and possible. In doing this it is important to consider two things. First, the variable at hand, must be sufficiently dynamic or the opportunity must exist to make it more salient. Second, if low forced compliance is chosen, a backfire effect can occur. For practitioners, this research indicates that self-persuasion treatments can be used as a tool in the public administration context. For instance, in a situation in which a high amount of policy alienation exists, public managers can choose to give self-persuasive trainings to their subordinates. This can give employees a sense for the added value of a policy which can potentially reduce levels of red tape. However, these tools must be used with caution in order to avoid backfire effects.

Limitations and future research

We carefully consider the three most salient the limitations of this study and accordingly give recommendations for future research. Our first limitation is that due to the low intensity treatment a large sample size is needed to find significant effects (Anderson & Stritch, 2016). Therefore, the found effects are sometimes only marginally significant, for example in the case of public service motivation. Future research could test these interventions on larger samples or could test the effect of similar but more intense interventions.

Our second limitation concerns the representativeness of the sample, which can be problematic for external validity (Morton and Williams, 2009). Our subjects were not randomly selected and not fully representative for the sample. We recognize that the persons who have decided to take part in this survey could have other characteristics than persons who did not. For example, some persons in the group we surveyed already had a strong opinion about the policy at hand. Moreover, our sample differed significantly from the Dutch population of health care professionals. Unfortunately, these tests were however based on data from 2012 instead of 2016. Comparisons with more recent data could determine the actual representativeness of our sample. Nevertheless, considering internal validity, subjects they were randomly allocated to different conditions

and randomization checks were performed on background variables (Morton and Williams, 2009). As this was randomization was successful and equality of groups on the basis of background variables was established, we consider internal validity sufficient.

Third, we placed the two treatments directly behind each other and in the post questionnaire, we had to make choices about the sequence of our dependent variable scales. Thus, all questions but those of public service motivation were not asked directly after the treatment, which could reduce the size of the effect measured of the societal meaningfulness intervention. Future research could measure the effect directly after the intervention and thus determine the actual size of the effect.

Conclusion

Experimental public administration is underdeveloped in comparison with fields such as psychology and economy (Van de Walle & Van Ryzin, 2011). Moreover, the potential of using psychological insights to develop tools for survey experiments has been under examined in PA research. Our study shows that low intensity self-persuasion interventions can be used as tools to activate and manipulate PA related concepts, under conditions of the examination of variables and context beforehand. We invite other researchers to

test this on other concepts, in other forms and in other contexts.

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Appendix A

Text of experimental treatments

Original treatments were in Dutch. The designs were included in a survey and first randomly presented one of the following text to people (study 1):

Treatment - Higher public service motivation - Could you describe the added value of your work for society in three to five sentences? These sentences will be added to a presentation given [peers].

Control - Neutral description of physical environment - Could you describe your normal psychical workplace in three to five sentences? These sentences will be added to a presentation given to [peers].

Afterwards we randomly presented one of the following sentences as a societal meaningfulness treatment (study 2):

Treatment - Lower societal meaningfulness. Imagine you have to write three to five sentences concerning how the [policy] has a positive influence on society. This sentences will be included in a presentation given to [peers]. Could you note these lines below:

Treatment - Higher societal meaningfulness. Imagine you have to write three to five sentences concerning how the [policy] has a negative influence on society. This sentences will be included in a presentation given to [peers]. Could you note these lines below:

Control - Neutral societal meaningfulness. Imagine you have to write three to five sentences describing the [policy] as neutrally as possible. This sentences will be included in a presentation given to [peers]. Could you note these lines below:

Appendix B

Factor loadings and weighted omega of all items of dependent variables

Table 5

Measurement model of public service motivation

Factor/Item	Factor loadings	Weighted Ω
I am very motivated to contribute to society	0.88	0,91
I find it very motivating to contribute to society	0.88	
Making a difference in society, no matter how small, is very important to me	0.85	
Defending the public interest is very important to me	0.72	

Table 6

Measurement model of societal meaningfulness

Factor/Item	Factor loadings	Weighted Ω
Societal meaningfulness: Transparency	0.91	0,96
I think that the DRG policy leads to more transparency in healthcare costs and quality on the long term (in more than two years).	0.95	
I think that the DRG policy leads to more transparency in healthcare costs and quality on the short term (within two years).	0.91	
I think that the DRG policy has already led to more transparency in healthcare costs and quality.	0.87	
Overall, I think that the DRG policy leads to more transparency in healthcare costs and quality.	0.92	
Societal meaningfulness: Efficiency	0.92	0,99
I think that the DRG policy leads to more efficiency in the mental health care sector on the long term (in more than two years).	0.97	
I think that the DRG policy leads to more efficiency in the mental health care sector on the short term (within two years).	0.98	
I think that the DRG policy has already led to more efficiency in the mental health care sector.	0.96	
Overall, I think that the DRG policy leads to more efficiency in the mental health care sector.	0.98	

Societal meaningfulness: Patient choice	0.79	
I think that the DRG policy leads to more choice possibilities for patients on the long term (in more than two years).	1	0,99
I think that the DRG policy leads to more choice possibilities for patients on the short term (within two years).	1	
I think that the DRG policy has already led to more choice possibilities for patients.	0.99	
Overall, I think that the DRG policy leads to more choice possibilities for patients.	0.99	

Appendix C

Randomization checks

Table 7

<i>Sample composition of background variables in study 1</i>				
	<i>PSM treatment</i>	<i>Control group</i>	<i>Mean</i>	<i>Difference tests</i>
Gender (% female)	74,46%	73,97%	74,20%	,01
Age	52,15(12,44)	51,58(12,06)	51,84(12,22)	F = ,11
Education ¹	2,72(,47)	2,69(,48)	2,7(,47)	,38
Manager (%..)	73,80%	76,10%	75,00%	,27
Type of organisation ²	2,04(,90)	2,01(,92)	2,03(,91)	1,39
Societal meaningfulness treatment ³	,00(,84)	-,05(,80)	-,02(,82)	2,57
Profession – Basic psychologist	13,00%	13,80%	13,40%	,04
Profession - Clinical psychologist	28,80%	26,10%	27,40%	,36
Profession - GZ psychologist	64,10%	61,00%	62,40%	,41
Profession - Psychotherapist	32,10%	32,10%	32,10%	,00
Profession - Psychiatrist	,50%	,00%	,20%	1,19
Profession - Researcher	,80%	,20%	3,50%	,11
Profession - Other	,00%	10%	8,20%	2,24

¹Educational level are 1=higher education, 2=academic education, 3=post-academic education and 4=other

²Type of organisation refers to 1=Institution, 2=Institution and independent, 3=independent

³Societal meaningfulness treatment -1=negative treatment, 0=neutral treatment, 1=positive treatment

X² and F-values are reported, F-values are preceded by F

Table 8

Sample composition of background variables in study 2

	<i>Negative treatment</i>	<i>Neutral treatment</i>	<i>Positive treatment</i>	<i>Mean (all)</i>	<i>Difference tests</i>
Gender (%female)	72,60	76,50	74,80	78,20	,52
Age	52,13(12,06)	52,53(12,43)	52,41(11,70)	52,34(12,04)	F= 0,038
Education ¹	2,68(,48)	2,71(,47)	2,73(,49)	2,68(,49)	,54
Manager	21,80	23,90	26,60	23,20	.77
Type of organisation ²	1,99(,89)	1,99(,94)	2,22(,90)	1,99(,91)	9,582*
PSM treatment (%in treatment group)	50,00	41,60	52,90	45,50	3,06
DRG-free organisation (%yes)	13,80	13,40	12,60	17,10	.08
Works with DRG (%that does)	84,90	86,60	89,20	82,50	1,00
Administrative Personnel (%yes)	52,10	49,20	53,20	51,70	.70
Behavioural support	33,74(15,89)	33,69(17,13)	33,77(17,18)	33,73(16,69)	F= ,001
Profession - Basispsychologist	18,60	15,10	11,80	17,60	2,23
Profession - Clinical psychologist	24,10	27,70	30,00	22,10	1,14
Profession - GZ psychologist	60,00	57,10	68,20	59,20	3,17
Profession - Psychotherapist	32,40	31,10	36,40	27,10	,78
Profession - Psychiatrist	0,00	0,80	0,00	0,20	2,15
Profession - Researcher	4,10	4,20	1,80	2,90	1,28
Profession - Other	6,20	10,90	5,50	8,10	3,03

¹Educational level are 1=higher education, 2=academic education, 3=post-academic education and 4=other

² Type of organisation refers to 1=Institution, 2=Institution and independent, 3=independent

** Significant at the 0,01 level * Significant at the 0,05 level.

X² and F-values are reported, F-values are preceded by F

Appendix D

Correlations

Table 10

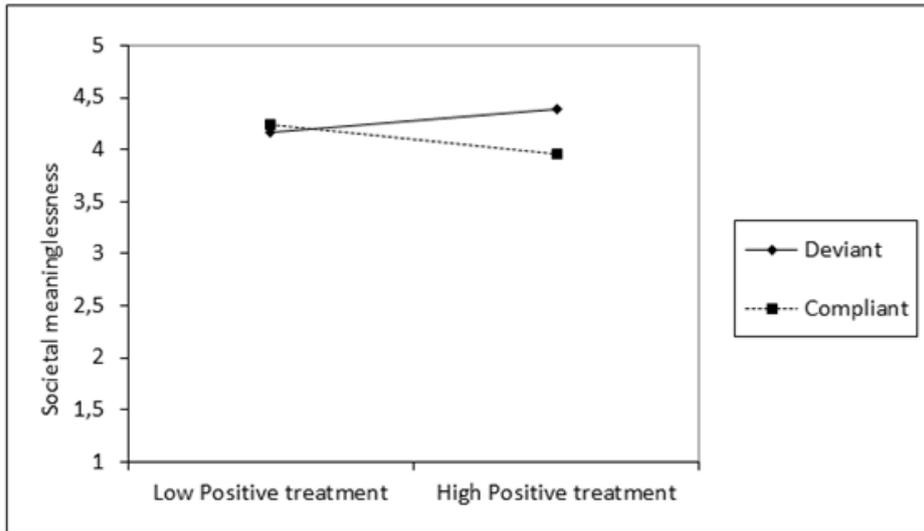
<i>Correlations for variables in the study</i>									
	1	2	3	4	5	6	7	8	9
1. Gender (ref = male)	1								
2. Age	-,31**	1							
3. Education	-,02	,08*	1						
4. Organisation (institution)	,11**	-,32**	,02	1					
5. Organisation (independent)	-,02	-,00	,05	-,39**	1				
6. Managerial position (ref)	-,02	,03	,17**	,12**	,07	1			
7. Compliance	,05	-,23**	-,05	,13*	,03	-,01	1		
8. Positive description	,01	,00	,02	-,09	-,04	,04	-,22**	1	
9. Negative description	-,03	-,01	-,04	,01	,11*	-,04	,56**	-,52**	1

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Appendix E

Original graph of interaction study 2b

Figure 5: Original interpretation of interaction of positive treatment and compliance based on Dawson (2014)



We used the templates as provided by Dawson (2014) to plot our results. More specifically, we used the binary moderator variant of these templates. Then, we slightly adjusted the original graph based on Dawson (2014), due to the following considerations. First, a low positive treatment refers to no positive treatment. However, in our experiment, subjects who received no positive treatment, received either the negative or the neutral treatment. Nevertheless, as we find no effect of the compliant negative group, the low positive treatment in the case of compliancy refers to the neutral group. In the case of no compliancy we also compare with the neutral group, as no subjects were deviant in the negative treatment group.