Chapter 8 Willingness to participate in a lifestyle intervention program of patients with diabetes mellitus type 2: a conjoint analysis

Adapted from:
Paul F. van Gils, Mattijs S. Lambooij, Marloes H.W. Flanderijn, Matthijs van den Berg, G. Ardine de Wit, Albertine J. Schuit, Jeroen N. Struijs, Bernard van den Berg
Patient Preferences and Adherence Volume 2011:5 Pages 537 – 546
Willingness to participate in a lifestyle intervention program of patients with diabetes mellitus type 2: a conjoint analysis

ABSTRACT

Background
Several studies suggest that lifestyle interventions can be effective for people with or at risk for diabetes. The participation in lifestyle interventions is generally low. Financial incentives may encourage participation in lifestyle intervention programs.

Objective
The main aim of this exploratory analysis is to study empirically potential effects financial incentives on diabetes patients’ willingness to participate in lifestyle interventions. One financial incentive is negative (‘co-payment’) and the other incentive is positive (‘bonus’). Key part of our research is to contrast both incentives. The second aim is to investigate the factors that influence participation in a lifestyle intervention program.

Methods
We used conjoint analysis techniques to empirically examine associations between the factors that influence participants’ willingness to participate in a lifestyle intervention. For this purpose diabetic patients received a questionnaire with descriptions of hypothetical lifestyle interventions. They were asked if they would be willing to participate in these hypothetical programs.

Results
In total, 174 observations were rated by 46 respondents. Analysis showed that money was an important factor that was independently associated with respondents’ willingness to participate. Receiving money was not associated with willingness to participate, but having to pay is negatively associated with participation in the lifestyle intervention. Twenty-three males and twenty-three females responded.

Conclusion
Our conjoint analysis results suggest that financial considerations may influence willingness to participate in lifestyle intervention programs. Our conjoint analysis
results suggest that a positive financial incentive in the form of a bonus may not be an effective strategy to encourage people to participate in lifestyle interventions. Financial disincentives in the form of co-payments might however discourage participation and should therefore be avoided.
Background

A lifestyle intervention program can be defined as a planned and targeted approach to change the behavior of people with the aim to promote health or prevent disease. Lifestyle intervention programs can have a positive impact on public health, for example, by reducing the risk factors for diabetes complications like high blood pressure, high cholesterol level and high body weight (Toobert et al., 2007; Pi-Sunyer et al., 2007; Davies et al., 2008). These interventions could potentially also slow down the increasing prevalence of type 2 diabetes mellitus (DPP, 2002; Knowler et al., 2002; Lindstrom et al., 2006), that is expected to be 366 million worldwide by the year 2030 (Wild et al., 2004).

A major challenge in lifestyle intervention programs is to increase people’s willingness to join, as participation in such programs is in general relatively low. For instance, a weight loss program for obese patients in the United States only had a 40% participation rate, i.e. adherence and compliance (Zhao et al., 2008; Mokdad et al., 2001). Also, only 15% of eligible persons participated in a German disease management program (Javaher et al., 2006). In the latter study, the main reason for participation was that their health insurer offered them to join.

The lower the participation rate in a lifestyle program, the smaller the public health impact will be (Zhao, 2008; Icks et al., 2007). It is therefore important to get a better understanding of people’s willingness to participate in lifestyle intervention programs. There are different techniques to measure why people participate in interventions. One of them is the conjoint analysis technique (Phillips et al., 2002; Bishop et al., 2004; van den Berg et al., 2008a; van den Berg et al., 2008b). This technique has the advantage that it enables to quantify the relative importance of characteristics of a lifestyle intervention in people’s program participation decisions. Obviously, this information can also be used to explore why people are not willing to participate in lifestyle intervention programs. Results suggest that people are willing to pay to participate in lifestyle interventions but are not willing to pay the full program costs’ (Johnson et al., 2006). Moreover, individuals with high perceived risks are willing to
pay more compared with individuals with low perceived risks. An alternative technique for conjoint analysis is to use a standard questionnaire and simply ask why people decided to participate or not to participate in a lifestyle intervention program. Studies that investigated reasons for non-participating using this technique, suggests that affordability is a barrier to participate (Ziebland et al., 1998; Chinn et al., 1999). For instance, potential participants indicate that they cannot afford to pay the relatively higher prices for better quality food or they cannot afford to pay for using sport facilities. When money is no longer a barrier, people are more likely to change their behavior. These findings derived with conjoint analysis techniques and standard questionnaires suggest that providing subsidies to participants could be effective if the aim of the policy is to increase participation. This could subsequently increase the public health impact of lifestyle interventions as the number of people participating in these programs increase (Zhao, 2008; Icks, 2007). Germany seems the first country that uses this policy instrument of subsidies partly as an incentive to encourage active participation in primary and secondary prevention. Especially, positive financial incentives in the form of a bonus to reward active participation were introduced (Schmidt, 2008).

To the best of our knowledge no empirical research is performed to analyze the effect of various types of financial incentives on participation in lifestyle intervention programs. The main aim of this paper is to explore empirically potential differences of two types of financial incentives on diabetes patients’ willingness to participate in lifestyle interventions. One financial incentive is negative (‘co-payment’) and the other incentive is positive (‘bonus’). Key part of our research is to contrast both incentives. Our secondary aim is to examine which other factors of a lifestyle intervention program are associated with diabetes patients’ willingness to participate.
Methods

Conjoint analysis

We used the conjoint analysis technique to examine which factors were associated with participants’ willingness to take part in a lifestyle program. This conjoint analysis technique has an important advantage compared with standard questionnaire research: in a conjoint analysis people are forced to make trade-offs. This implies that they cannot indicate that all factors of a lifestyle intervention program are of equal importance. In a conjoint analysis a hypothetical lifestyle intervention program is described in terms of characteristics (the attributes). The technique presents hypothetical scenarios (vignettes) to respondents that vary with respect to the levels of the attributes (Ryan et al., 2005b). Respondents are asked if they would be willing to participate in this hypothetical lifestyle intervention program.

Literature to determine conjoint scenarios

A literature search was carried to determine the vignette attributes. Search terms were: lifestyle program, lifestyle modification, physical activity, exercise, adherence, compliance and participation. For this purpose the databases PubMed, Cochrane, PsycINFO and Picarta were used.

Factors that seem to influence peoples’ willingness to participate in lifestyle intervention programs include time, costs, counseling, the kind of sports activity in the program, and the composition of the group (Culos-Reed et al., 2000; Ferrand et al., 2008; Jones et al., 2007; Nagelkerk et al., 2006; Chinn, 1999; Ziebland, 1998). Based on the literature findings we created six attributes. They are presented in Table 1.

Next, levels were assigned to the attributes. The levels of the attributes were chosen in a range wide enough to clearly reflect differences in impact on the respondents.

The main aim of our study was to test for potential differences between a negative (co-payment) and a positive (bonus) financial incentive to participate. Therefore, we randomly divided our research population in two groups. One group received a questionnaire in which they had to pay a co-payment to participate in the hypothetical lifestyle intervention and the other group received a questionnaire in which they
received a bonus to participate in the hypothetical lifestyle intervention. Please note that all other attributes were exactly similar between both versions of the questionnaire. Appendix A presents the details of the design of the conjoint experiment that was used in this study.

**Study population**

Patient questionnaires were distributed in 2009 among diabetes type 2 patients by two specialized nurses in general practices. None of the diabetes patients previously participated in a lifestyle intervention program and did have complications or comorbidities. One nurse distributed 63 questionnaires to patients visiting the clinic and another nurse sent out 192 questionnaires to a random selection of her patients. All respondents participated voluntarily in this study, as they were free to fill in the questionnaire or not.

**Statistical analysis**

Respondents’ characteristics were analyzed using frequencies. We employed logistic regression to analyze conjoint scenarios, because we focused on the willingness of respondents to either or not participate in the hypothetical lifestyle program: answering categories yes or no. We also analyzed the influence of respondents’ characteristics on the willingness to participate in a lifestyle intervention program. The statistical program used for the analyses was Stata (v 11; Statacorp LP, College Station, TX).

As the key part of the analysis was to test for potential differences between hypothetical ‘co-payment’ and ‘bonus’ for participating in the hypothetical lifestyle intervention program, we included a spline in the logistic regression analyses. A spline is a combination of variables in a regression analysis and consists of a main effect, a dummy variable indicating a possible bend in the regression slope (the knot) and an interaction variable. The spline enables us to test whether the slope of the co-payment differs from the slope of the bonus (Marsh & Cormier, 2002). Main reason for including this spline is that people might react differently to a scenario with a negative
financial incentive compared with a scenario with a positive financial incentive. Appendix B gives a detailed explanation of the construction of the spline and a detailed explanation of its interpretation.

Results

Study population

In total, 174 observations were rated by 46 respondents (18% of the distributed questionnaires): implying that not all respondents answered 4 conjoint scenarios. The majority of respondents had the Dutch nationality (97.7%) and men and women were equally represented (50.0%). Their mean age was 67.3 years (SD: 11.2) and the mean Body Mass Index (BMI) was 28.8 kg/m² (SD: 5.7). About one third of the respondents had a lower vocational education (27.5%) and most of them were retired (53.7%). The characteristics BMI and age correspond to those characteristics found in a large observational study on diabetic patients in the Netherlands (Struijs et al., 2009; Struijs & Baan, 2011). As BMI and age are important characteristics of diabetic patients, we consider our sample as representative for the Dutch diabetic population.

Regression analyses

Table 2 presents the attribute estimates resulting from the logistic regression analysis. The signs of the coefficients (B) represent the influence of the attributes on respondents’ willingness to participate. The p-values only show statistical significance for the attribute ‘money’ (p=0.01) and the interaction term ‘money*receiving’ (p=0.04), which implies that, considering the included attributes, only money influences willingness to participate within the current study population. The positive sign of the ‘money’ attribute initially suggests a positive association between money and the willingness to participate. However, the interaction term of the spline suggests that the slope for paying differs from the slope of bonus (B = -0.006; p=0.04). For paying the slope is positive (main effect of paying, B=0.006; p=0.01) but for receiving money the slope becomes zero (main effect of receiving, the B of the interaction variable money* receiving is added to the main effect; 0.006 - 0.006 = 0). This means that receiving any amount of money does not affect the willingness of respondents to
participate in a lifestyle intervention program, but having to pay does discourage respondents to participate in a lifestyle intervention program.

**Discussion**
Lifestyle intervention programs can have a positive impact on public health but program participation if often quite low. This study investigated the factors, particularly financial factors, underlying diabetes type 2 patients’ willingness to participate in a lifestyle program. We applied conjoint analysis to measure respondents’ preferences regarding a lifestyle program. This study explored empirically potential differences between positive (bonus) and negative (co-payment) financial incentives on diabetes patients’ willingness to participate in lifestyle intervention programs.

The main finding of our study suggests that ‘co-payment’ is inversely related to the willingness to participate in a lifestyle intervention program. In other words, co-payment can discourage participation in the program. This finding is consistent with an earlier finding using conjoint analysis, which showed the unwillingness to pay by high-risk individuals for diabetes risk-reduction programs (Johnson, 2006). In contrast, receiving a bonus seems not to be associated with a higher willingness to participate in the program. This result seems also consistent with findings in the literature. Rewards for following a lifestyle program are less effective in contrast to rewards for the attendance of vaccination or screening programs (Voigt, 2010) and there is insufficient evidence of the effectiveness of rewards to promote lifestyle changes (Jochelson, 2007; Sutherland et al., 2008; Wilkinson, 2008).

A strength of this study is that our conjoint analysis included both a ‘co-payment’ and a ‘bonus’. This enabled us to test for possible differences between positive and negative incentives. The main advantage of a conjoint analysis is that it can be used to gain insights in the relative importance of intervention attributes and the way people value these attributes.

A limitation of our study is the small group of respondents limiting the conclusion of this paper on the relative value and the importance of the vignette-items. Although the 174 observations are sufficient to report the results on the vignette-level, a proper
analysis among subgroups of patients requires a much larger sample (Ryan et al., 2005a; Baltussen et al., 2006; Cheraghi-Sohi et al., 2007.) Factors underlying patients’ willingness to participate in a lifestyle intervention should be studied more extensively. Therefore further research should be done, preferably in larger samples, thus facilitating analysis of relevant subgroups. Another limitation of our study is the limited knowledge on the external validity of the answers of the conjoint analysis. To what extent reflect the answers to hypothetical scenarios choices made in everyday life (Ryan & Gerard, 2003)?

Although progress in comparing, stated in a questionnaire, with revealed preferences (people’s actual behavior) has been performed in other health care settings (Blumenschein et al., 2008), evidence in the field of health promotion is scarce. Therefore empirical research to test for potential differences between the impact of copayments and bonuses on willingness to participate in lifestyle intervention programs using revealed preferences compared with stated preferences is encouraged.

It would be interesting if future research could explore the differences in respondents’ value for not having to pay a copayment (related to scenarios with a bonus) compared to having to pay a copayment (related to scenarios with copayments). It is worth taking these differences into account in study designs as this sample was split, but one could consider testing this result remains the same if the same people value zeros compared with a bonus and with a copayment.

**Conclusion**

We showed that financial considerations may influence willingness to participate in lifestyle intervention programs. Copayments could therefore discourage participation, while rewards do not stimulate participation. An implication of our findings might be that a non income related co-payment, often applied in the context of health insurance coverage, should be avoided.

**Disclosure**

The authors report no conflicts of interest in this work
References


Blumenschein K, Blomquist GC, Johannesson M, Horn N, Freeman P. Eliciting willingness to pay without bias, evidence from a field experiment. Econ J, 2008; 118: 114-37


Jones M, Jolly K, Raftery J, Lip GY, Greenfield S. 'DNA' may not mean 'did not participate': a qualitative study of reasons for non-adherence at home- and centre-based cardiac rehabilitation. Fam Pract, 2007;24:343-57.


## Table 1. Attributes and levels

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Levels</th>
</tr>
</thead>
</table>
| Time spend on the program | 2.5 hours per week  
                          | 4 hours per week                                                      |
| Arrangement physical activity lessons | Individually  
                                        | With men and women  
                                          | With people of the same gender              |
| Group activity          | Only with people without diabetes  
                          | Only with other diabetes patients                                     |
| Sports activity         | Walking/cycling  
                          | Fitness (treadmill, rowing machine, bicycle)                           |
| Counseling              | None  
                          | Physical therapist/Sports teacher                                      |
| Money                   | Co-payment= €500 per year  
                          | Co-payment= € 327.50 per year  
                          | Co-payment= € 155 per year  
                          | € 0 per year  
                          | Bonus = € 155 per year  
                          | Bonus = € 327.5 per year  
                          | Bonus = € 500 per year |

*Half of the research population received a questionnaire in which they had to pay for participating in the intervention. The other half received a questionnaire in which they received money to participate.
Table 2. Logistic regression based on the attributes: unstandardized B, Odds Ratio, 95% CI Odds Ratio, p-value, of participation in the hypothetical lifestyle interventions (N=46; N observations = 174)

<table>
<thead>
<tr>
<th>Attributes</th>
<th>B</th>
<th>Odds Ratio</th>
<th>95% CI Odds Ratio</th>
<th>Odds Ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Time spend on the program</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Ref. category = 2.5 hours)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 hours</td>
<td>-0.067</td>
<td>0.935</td>
<td>0.448 to 1.953</td>
<td>0.860</td>
<td></td>
</tr>
<tr>
<td><strong>Arrangement physical activity lessons</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Ref. category = with men and women)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With people of the same gender</td>
<td>0.577</td>
<td>1.780</td>
<td>0.729 to 4.347</td>
<td>0.207</td>
<td></td>
</tr>
<tr>
<td>Individually</td>
<td>0.405</td>
<td>1.500</td>
<td>0.622 to 3.619</td>
<td>0.363</td>
<td></td>
</tr>
<tr>
<td><strong>Group activity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Ref. cat. = only with people without diabetes)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Only with other diabetes patients</td>
<td>0.490</td>
<td>1.633</td>
<td>0.786 to 3.392</td>
<td>0.192</td>
<td></td>
</tr>
<tr>
<td><strong>Sports activity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Ref. cat=walking/cycling)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fitness (treadmill, rowing machine, bicycle)</td>
<td>0.467</td>
<td>1.595</td>
<td>0.771 to 3.296</td>
<td>0.195</td>
<td></td>
</tr>
<tr>
<td><strong>Counseling</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Ref. cat = no counseling)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counseling from a physical therapist/sports instructor</td>
<td>0.281</td>
<td>1.325</td>
<td>0.631 to 2.783</td>
<td>0.438</td>
<td></td>
</tr>
<tr>
<td><strong>Money</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-payment= €500 per year</td>
<td>0.006</td>
<td>1.006</td>
<td>1.002 to 1.011</td>
<td>0.010</td>
<td></td>
</tr>
<tr>
<td>Co-payment= €327.50 per year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-payment= €155 per year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>€0 per year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonus = €155 per year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonus = €327.5 per year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonus = €500 per year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Receiving</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-0.429</td>
<td>0.651</td>
<td>0.220 to 1.930</td>
<td>0.453</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Interaction money*receiving</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-0.006</td>
<td>0.994</td>
<td>0.990 to 0.999</td>
<td>0.040</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Intercept</strong></td>
<td>-1.258</td>
<td>0.284</td>
<td>0.098 to 0.827</td>
<td>0.016</td>
<td></td>
</tr>
</tbody>
</table>
Appendix A

Design conjoint analysis: Attributes and levels

The combination of six attributes and levels (two attributes with four levels, one attribute with three levels, and one attribute with four levels) gave rise to $2^4 \times 3^1 \times 4^1 = 192$ hypothetical lifestyle intervention programs (possible scenarios). Each participant randomly received a set of four out of 48 sets of scenarios (the 192 scenarios were clustered in 48 sets of 4 scenarios).

One of the challenges in designing a conjoint analysis experiment is to avoid the combination of unrealistic attributes and levels in one scenario. (Lambooij et al., 2007) In order to make sure that presented scenarios were realistic, we rephrased several items. Another design challenge is to avoid that respondents are confronted with scenarios-attributes that are similar (similarity in the set of four scenarios they received), resulting in reducing the motivation of the respondents due to a boring task. Therefore, we tested if more than three questionnaires had four or more scenario-attributes that were similar. If this was the case, we started a new randomization. A second measure was that the questionnaires were constructed by multiple vignette-universes (i.e. a set of all possible vignette combinations): five datasets with the 192 vignettes were constructed and they were each separately randomly ordered. This resulted in that each unique vignette could be rated five times, but that it was always combined with other vignettes. This decreased the risk that any vignette was combined more than once with other vignettes those were similar. So even when a vignette was rated by a respondent who became less motivated because of too little variation between the vignettes, a similar vignette would be rated by another respondent who was still motivated because the choices in her questionnaire varied sufficiently.

Conjoint Analysis: Survey questions

Respondents were first asked to rate the four hypothetical lifestyle interventions with a grade ranging from ‘1’ to ‘10’, where ‘1’ was defined as really dislike the lifestyle intervention and ‘10’ as really like the lifestyle intervention. The rating exercise
measures which aspects of the lifestyle intervention participants valued; see e.g. Van den Berg et al. (van den Berg et al., 2005; van den Berg, 2008a). Subsequently, respondents were asked whether or not they would be willing to participate in the hypothetical lifestyle interventions (answering categories ‘yes’ or ‘no’). Please note that valuation might differ from willingness to participate. In order to test congruence between the estimated value of the program and the intention to participate, we added both questions.

We consulted a communication expert to adjust the wording of the conjoint analysis questionnaire in an attempt to avoid bias due to incorrect interpretation of the conjoint questions.

Figure A1 presents an example of a hypothetical lifestyle intervention (a scenario).

---

2 Results were not used in this paper
**Figure A1: Example scenario**

<table>
<thead>
<tr>
<th>Program 1</th>
<th>10100</th>
</tr>
</thead>
<tbody>
<tr>
<td>The program will take you 4 hours per week (including travel time)</td>
<td></td>
</tr>
<tr>
<td>The program will take place in a group of men and women</td>
<td></td>
</tr>
<tr>
<td>You will excercise (more) with other diabetes patients</td>
<td></td>
</tr>
<tr>
<td>You will walk/cycle during the program</td>
<td></td>
</tr>
<tr>
<td>While excercising, you will be supervised by a sports instructor or a physiotherapist</td>
<td></td>
</tr>
<tr>
<td>You will have to pay €327.50 per year to participate in the program</td>
<td></td>
</tr>
</tbody>
</table>

1. Grade program 1 (1 indicates really dislikes the program and 10 indicates really likes the program)*

   1 2 3 4 5 6 7 8 9 10
   ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

2. Would you be willing to participate in program 1?
   ☐ yes ☐ no

* Results were not used in this paper
Appendix B

The spline in our logistic regression analysis

A spline enables us to test whether the slope of a negative financial incentive (‘co-payment’) differs from the slope of a positive financial incentive (‘bonus’) for participation in the hypothetical lifestyle intervention (scenario) (Marsh & Cormier, 2002). Main reason for including this spline is that people might react differently to a scenario when they are asked to pay compared with receiving money for a similar scenario. We constructed a spline using three variables. The first variable expressed the amount of money received or paid (ranging from -500 to 500 Euros; see Table 1). By means of this variable, the association between the amount of money and the probability of participation in the lifestyle intervention is tested. The second variable is a dummy with the value 0 in case of a set of scenarios stating that the respondents would have to pay versus the value 1 for scenarios indicating that people would receive money in return for participation in the lifestyle intervention program. This dummy is called the “knot” and it defines the place where the slope of the model may change. Third, an interaction of these two variables was entered into the logistic regression analyses. When the slope before the knot (here: negative values of money, or the negative side of the x-axis) differs from the slope after the knot (here: positive values of money, or the positive side of the x-axis), this interaction will yield a statistically significant result. Together these three variables enable us to test whether the slopes and the continuance of the logistic regression analyses differ between the negative and the positive financial incentives for participation in the hypothetical lifestyle intervention programs.

When the interaction yields a significant result, this means that the equation has a join:
In this case we see a main effect of about 0.006 and an interaction effect of -0.006. In order to understand the effect, simply apply standard interpretation of interaction effects with dummy variables to main effects. When the dummy is zero, one only interprets the main effect, in this case money. Here, the dummy is zero for paying money, so for paying money the slope is 0.006. For receiving money, the dummy
becomes 1. When filling this in into the equation, one adds the B of the interaction effect to the main effect of money and 0.006 minus 0.006 equals zero. Therefore, the slope for receiving money becomes zero and we conclude that we found no association for people who receive money. Overall we conclude that when people have to pay (more) money, they become less likely to participate in the program, while when people receive money, this does not encourage them to participate in the program.