Education and Income as Social Identities: Comparative Fit, Identification and Psychological Well-Being

Andreea D. Dobos

S4598954

Department of Psychology, University of Groningen

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Supervisor: dr. Toon Kuppens

Second Evaluator: Kyriaky Fousiani

In collaboration with: Angie Shaya, Keno Heddinga, Kira Groenland and Meike Veenstra

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Abstract

The present study examined the differences in comparative fit and identification for different aspects of socioeconomic status, namely education and identification as well as their association with psychological well-being. Participants(N = 176) completed an online Qualtrics survey assessing comparative fit and identification with both income and education-based groups, and a measure of mental well-being. A cross-sectional within-subjects design was used. Regression analyses and paired-samples t-test were performed. Research findings indicated that identification with education was stronger than with income despite greater comparative fit for income groups. Neither identification with education nor with income was found to be associated with psychological well-being. These results demonstrate that different aspects of socioeconomic status function differently as social categories and identity bases and more than mere identification is needed to experience the psychological benefits associated with group membership.

Education and Income as Social Identities: Comparative Fit, Identification and Psychological Well-Being

Education and income level are both central contributing factors to one's socioeconomic status yet the extent to which individuals experience them as psychologically meaningful differs. According to the social identity approach (Scheepers & Ellemers, 2019), a theoretical framework for understanding how group membership influences individuals' cognition, emotion and behaviour, the psychological meaningfulness attributed to one's education or income group and resulting psychological benefits depends on whether group membership has been integrated as part of one's self-concept.

The social identity theory (SIT) posits that one's self-concept is made up of two identities, namely, personal and social identity (Hornsey, 2008). The personal identity relates to the aspects of the self that differentiates individuals from one another. It refers to personal traits and abilities that make the individual unique. Whereas social identity refers to the aspects of the self that are derived from an individual's group memberships. People tend to categorise themselves into groups, and such group memberships along with their emotional significance are a part of one's self-concept. Individuals seek to be a part of a group that they see as positively distinct in some way to other relevant groups. One's self-esteem is enhanced by identifying with members of one's group (ingroup) and differentiating from others (outgroup). Through positive intergroup social comparisons, a sense of belonging, meaning and greater self-esteem is achieved leading to a positive social identity.

Whereas social identity theory aims to explain why group membership matters, the self-categorisation theory (SCT) extends further by explaining that different levels of self-categorisation become psychologically salient depending on the context (Turner et al.,

1994). People do not have one fixed identity but will rather self-categorise depending on the situation. SCT suggests that identity salience depends on the comparative fit, normative fit and accessibility. Normative fit refers to an alignment between group behaviours and stereotypical expectations of that group. Accessibility refers to the perceiver's readiness to use a given social category. In this study however, I focus on comparative fit. Comparative fit is a way to measure the distinctiveness between groups (whether there are greater/more salient between-group differences than within-group differences). In other words, the higher the comparative fit, the more distinct the group is, and the greater the group identification is.

Haslam et al. (2008) state that being a member of a valued group is a valuable psychological resource. It does not only benefit the individual socially but can also reduce the effects of stress and illness thus significantly impacting one's well-being. This has been defined by Jetten et al. (2017) as the "social cure". When group membership provides meaning, support, and a sense of belonging, it positively affects health and well-being. According to the social cure (Jetten et al., 2017), social support and a collective self-esteem can be derived from identification with social groups, further diminishing stress. These psychological benefits extend to larger, more abstract categories such as gender or ethnicity, assuming group meaningfulness and integration into one's self-concept. Increased self-esteem has been repeatedly linked to greater psychological well-being (Paradise & Kernis, 2002) and identification with such social groups can increase self-esteem by enabling individuals to derive a positive self-worth from their group membership (Scheepers & Ellemers, 2019).

Individuals' education and income group membership are both important parts of one's self-concept, yet how strongly they identify with either groups is still unclear (Easterbrook et al., 2019). Research shows that those with higher income and education tend to place more

importance on education and income identities than those with a lower level. Those with higher education tend to display a stronger identification with education groups than the less educated (Kuppens et al., 2015). Little research has been currently conducted comparing identification with education and income groups.

Based on the social identity approach, education and income groups are expected to differ on some aspects such as their psychological benefits and meaningfulness. According to the SCT, when an identity becomes salient partly depends on the comparative fit. Educational groups are more socially recognised and defined in contrast to income groups that tend to be more ambiguous, privately experienced and less openly disclosed. It is therefore expected to observe higher comparative fit for education than income groups.

Furthermore, SIT argues that individuals identify more strongly with positively distinct groups that they value thus enhancing well-being through a sense of belonging and positive self-esteem. Educational attainment is linked to perceptions of competence and social status, explaining how education can be a valuable group and social identity. (Kuppens et al., 2015; Dunstone et al., 2023). On the other hand, income is primarily reflective of material resources and is a less shared social identity, which can limit its relevance for self-definition (Easterbrook et al., 2019). As a result, greater identification with education groups than with income groups can be expected.

Lastly, the social cure perspective posits that identification with valued social groups promotes psychological well-being by providing access to key psychological resources (Haslam et al., 2008; Jetten et al., 2017). In line with the last two postulations, educational groups are more likely to be a valued source of identification and are thus expected to be more strongly associated with psychological well-being than identification with income groups.

Consequently, it is hypothesised that 1) education groups have higher comparative fit than income groups, 2) individuals identify more strongly with their education than with their income group and 3) identification with one's education group is more predictive of psychological well-being than identification with one's income group.

Methods

Participants

A total of 176 participants completed the online survey. 110 participants identified as males and 60 identified as females whereas one participant preferred not to disclose their gender and values are missing for five more participants. Participants had to be a minimum of 16 years old to take part in the study. The age distribution of the sample is displayed in Table 1. 50.6% of the sample had obtained or is currently pursuing a bachelor's degree or equivalent diploma. The survey was available in both English and Dutch. 54.5% of participants completed the survey in English and the remaining 45.5% in Dutch. Descriptive statistics regarding the subjective income are displayed in Table 2.

Table 1

Age distribution

		Frequency	Valid Percent	Cumulative Percent
Valid	16-25 years	122	69.7	69.7
	26-35 years	21	12.0	81.7
	36-45 years	6	3.4	85.1
	46-55 years	14	8.0	93.1
	56-65 years	6	3.4	96.6
	66-75 years	6	3.4	100.0

	Total	175	100.0
Missing	System	1	
Total		176	

Table 2

Subjective household income frequencies

		Frequency	Valid Percent
Valid	1- Finding it very difficult to live on current income	8	4.6
	2 - Finding it difficult to live on current income	23	13.1
	3 - Coping on current income	54	30.9
	4 - Living comfortably on current income	77	44.0
	5 - Living very comfortably on present income	13	7.4
	Total	175	100.0
Missing	System	1	
Total		176	

Participants were recruited using a convenience sampling method. The students involved in this research project were responsible for recruiting participants from their personal social networks. Recruitment took place via multiple channels, including WhatsApp, email and other

social media platforms. Participation was voluntary and no compensation was offered in exchange.

Materials

The survey was administered through Qualtrics and contained a total of 74 items and 7 scales. Only the measures relevant to the hypotheses of the present study will be described.

Demographic measures

Participants reported their age, gender, highest completed level of education (or for students, the level at which they are studying) and subjective household income. Subjective income was measured using a self-report item scored on a 5-point Likert scale with higher score indicating higher subjective income.

Comparative fit

Comparative fit was measured using six adapted items from Tanjitpiyanond et al. (2023). Three items measured the fit for education-based groups and the remaining three items for income-based groups. Participants were asked to rate both intragroup and intergroup similarity for both categorisations. Responses were measured on a 7-point Likert scale.

For education groups, individuals with high education, hereby defined as having obtained a bachelor's degree or equivalent diploma) were compared with those with low education (hereby defined as those who have not completed secondary education). For income groups, comparisons were made between rich and poor individuals. "Rich" was defined to the participants as "people that are well-off and for example can afford a nice house, car, and holidays" and "poor" was defined as "people that have trouble making ends meet and for example have trouble affording their groceries or a day out".

The scores were calculated by averaging the two intragroup similarity ratings and dividing by the intergroup similarity rating, with higher scores indicating greater comparative fit. An example of an intergroup similarity item is: “Thinking about people with a bachelor’s degree and people who did not finish secondary education, how similar or different do you think they are?”. A cronbach’s alpha of .617 was reported for the education-based groups and .194 for income-based groups.

Identification

Identification with both education and income groups was assessed using an adapted version of the multidimensional identification scale from Leach et al. (2008). The scale consisted of seven items per categorisation, leading to a total of 14 items. Responses were recorded on a 5-point Likert scale ranging from strongly disagree to strongly agree, with higher scores indicating greater identification with the group. An example item for identification with education is: “The level of education I have is an important part of my identity”. Internal consistency was acceptable for identification with education (Cronbach's alpha = .774) but slightly lower for income (Cronbach's alpha = .583).

Psychological well-being

Psychological well-being was assessed using the World Health Organisation Five Well-Being Index (WHO-5; De Graaff et al., 2024). Both the English and the Dutch versions used in this survey are validated translations. The scale consists of five items assessing subjective well-being over the past two weeks. Responses were recorded on a 5-point Likert scale ranging from “all the time” to “at no time”, with higher scores indicating greater well-being. Raw scores were computed by adding the responses on all items and subtracting five. A raw score below 13 is the

suggested cut-off for poor mental well-being. An example item is: “I have felt cheerful and in good spirits”. Internal consistency was high with a Cronbach's alpha of .825.

Self-esteem scale

Self-esteem was measured using a shortened version of the Rosenberg Self-Esteem Scale (Rosenberg, 1965). The scale consists of four items assessing global self-esteem. A validated Dutch translation has been used for the last three items but the first item was backtranslated by fellow researchers. Responses were measured on a 5-point Likert scale ranging from strongly disagree to strongly agree. An example item is: “I feel that I have a number of good qualities”. Negatively worded items were reverse-coded prior to analysis. Internal consistency was acceptable with a Cronbach’s alpha of .720.

Procedure

As previously mentioned, data was collected using an online questionnaire administered through Qualtrics. After accessing the survey, participants first chose the language in which they wanted to proceed. Participants were then informed of the purpose of the study, the contents of the survey, highlighting the voluntary nature of participation and assurances of anonymity and confidentiality. Participants provided informed consent before starting with the survey. Participants who did not provide informed consent were excluded from the data.

The questionnaire began with demographic items followed by the measures mentioned in the previous section. Additional scales included in the questionnaire but irrelevant for this research paper are measures of political trust, political meritocracy, and (meta-) stereotypes. The order of the scales in the survey was consistent across participants. Upon completion of the survey, participants were given the opportunity to leave a comment for the researchers. The duration of the survey was approximately 10 minutes.

Design

This study used a cross-sectional survey design with a within-subjects design as all participants provided data on both education and income categorisations. Participants were not assigned to conditions. The independent variable in this study was well-being and the dependent variables were identification with education and with income. Paired-samples *t*-tests were conducted to test the differences between education and income groups for both identification and comparative fit. A multiple regression analysis was performed to investigate the association between identification and mental well-being. All analyses were conducted using SPSS software (version 31).

Results

Prior to testing the hypotheses, assumption checks have been performed for all main analyses in this study. For the regression analysis, linearity and homoscedasticity were examined with a scatterplot of residuals. P-P plot and histogram of residuals were visually inspected controlling for the normality of residuals. Assumptions checks for multicollinearity and independence of observations (Burbin-Watson statistic = 1.783) were also performed. Identification with education and identification with income were moderately positively correlated (r = .425). In Table 3, all correlations between well-being and the four variables can be found. All assumptions for paired sample t-test and regression analysis were met. All plots and graphs, as well as syntax entries can be found in the appendix. Table 4 contains descriptive statistics of the four main variables and the dependent variable, well-being.

Table 3

Correlations

		Comparative fit education	Comparative fit income	Identification with education	Identification with income
Comparative fit education	Pearson Correl.	1	.004	.214**	.096
	Sig. (2-tailed)		.956	.008	.241
	N	174	174	154	152
Comparative fit income	Pearson Correl.		1	-.088	.003
	Sig. (2-tailed)			.279	.975
Identification with education	Pearson Correl.			1	.425***
	Sig. (2-tailed)				<.001
Identification with income	Pearson Correl.				1
	Sig. (2-tailed)				
Well-being	Pearson Correl.	.025	-.058	-.012	-.013
	Sig. (2-tailed)	.751	.469	.884	.869

Table 4

Descriptive Statistics

		Mean	N	Std. Deviation
Pair 1	Identification with education	3.2101	153	.63361
	Identification with income	2.9262	153	.48365
Pair 2	Comparative fit education	1.3515	174	.85612
	Comparative fit income	2.1686	174	1.43026
DV	Well-being	52.8861	158	18.56851

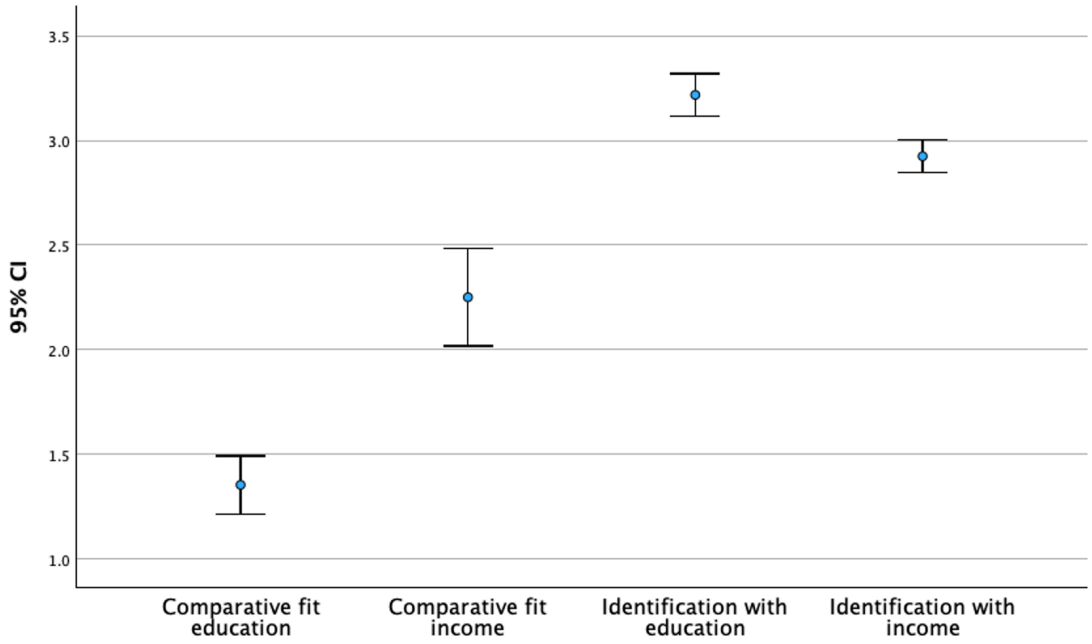
Paired sample *t*-tests

To test the first hypothesis, a paired sample t-test was conducted. Contrary to expectations, the comparative fit appeared to be significantly higher for income than for education groups as indicated by the negative mean difference score (M = -.817, SD = 1.66, p < .001). A large effect size was found (Cohen's d = 1.17). Therefore, the first hypothesis is not supported and an opposite relationship than predicted was observed.

A second *t*-test examined whether individuals identified more strongly with their education than their income groups. Greater identification was indeed found for one's education group (M = 3.21, SD = .634) than with one's income group (M = 2.92, SD = .484), supporting the second hypothesis. The difference was statistically significant (p < .001) and medium effect size (Cohen's d = .612) was observed. Figure 1 shows an error bar for both comparative fit and identification for both income-based and education-based categorisation.

Figure 1

Error bar graph for confidence interval of the means.



Regression analysis

To examine whether identification with one's education group is more predictive of psychological well-being than identification with one's income group, a multiple regression analysis was conducted where both identification variables were entered simultaneously and controlling for gender. The last hypothesis was not supported by the results as virtually no variance in well-being scores was explained by any of the identification variables (*R* squared = .009). Neither identification with one's education group or income group significantly predicted psychological well-being, $F(3, 145) = .437$. The model was not significant with a *p*-value of .727. In the current survey sample, no association was observed between group identification and mental well-being.

An additional post hoc regression analysis was performed to examine whether identification with income and education predicted self-esteem while controlling for gender. The model was not statistically significant, $F(3, 145) = 2.22$, $p = .088$ but some variance in self-esteem is explained by the model (*R* square = .044). Stronger identification with education was associated with higher self-esteem ($\beta = .018$, $p = .048$).

Discussion

The present study aimed to investigate the differences in comparative fit, group identification for different aspects of socioeconomic status, namely education and income, and their relation to psychological well-being. Firstly, the results showed that comparative fit was significantly greater for income groups than for education groups, inconsistent with the first hypothesis, suggesting that participants perceived income groups to be more distinct than education groups. Moreover, research findings demonstrate that participants identify more strongly with their education than with their income groups, in line with the second hypothesis.

Lastly, identification with one's education group was hypothesised to be more predictive of psychological well-being than identification with one's income group. This hypothesis was not supported by the study results as neither identification with one's education group nor with one's income group significantly predicted well-being and the overall model was insignificant.

Interpretation of Main Findings

In the theoretical framework in which comparative fit was presented, education-based groups, being more socially recognised and clearly defined, were thus expected to have higher comparative fit than income-based groups (Haslam et al., 2008), yet the opposite relation has been found One possible explanation for this finding is the labels used to refer to income groups and the operational definitions provided for those labels. Based on remarks left by participants upon completion of the survey, the labels "rich" and "poor" were perceived as more extreme than the labels used to denote education groups, further increasing the perceptions of distinctiveness between groups. If participants relied more heavily on the labels than on the operational definitions provided for those labels, this could have increased the perceived intergroup differences and led to an increased comparative fit for income-based groups. On the other hand, the labels used for education groups (that is, "high" and "low" education) may have appeared less extreme. Regardless, the operationalisation of education-based groups, that is individuals with a bachelor's degree and individuals who did not complete secondary education, was more straightforward and easier to understand and interpret. These explanations are in line with self-categorisation theory which states that category salience is shaped by the individual's perceptions of group boundaries. Comparative fit may not depend solely on XXX

Despite greater comparative fit for income groups, identification was indeed greater for education-based groups, consistent with prior research which suggest that education is more

stable and socially shared than income and making it an identity-relevant marker of socioeconomic status. Education is more publicly visible, recognised and associated with perceptions of competence and personal achievement, which would facilitate its integration into one's self-concept. Income remains less openly discussed and is less stable over time. Thus, despite greater perceived distinctiveness at the group level, its integration into one's self-concept is limited

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Limitations and Recommendations for Future Research

Certain limitations should be acknowledged. First, relying on a convenience sample consisting of mostly individuals with a higher SES limits the generalisability of the findings. . Given the groups studied, it is crucial to obtain data from individuals from both higher and lower educational backgrounds as well as different income groups. Moreover, as previously mentioned, the ambiguous and somewhat extreme group representation evoked by the operationalisation of the income groups might have influenced the comparative fit measure. This limitation can be addressed by using alternative labels with greater specificity. The use of more nuanced income categories may clarify whether the effects observed in this study are due to the group

categorisation or the labels used to denote such categorisations. . Additionally, language is also a limitation in this study. The survey was available online in both English and Dutch. Validated Dutch translations have been used whenever possible but some items were back-translated by fellow researchers. As a result, minimal differences in the meaning and interpretation of items could harm the reliability of the scales as well as alter the results. Future research could further explore the link between different dimensions of group identification and psychological well-being, ensuring that validated translations of scale items are used, and combining both quantitative and qualitative methods. Interviews can provide valuable additional information, especially when investigating such abstract constructs. Qualitative methods can be useful in exploring whether and how education and income groups provide meaning, belonging and support, in investigating how individuals experience SES-related categories as parts of their identity and under what circumstances do these categories become salient. Further research can provide deeper insight into why no social cure effects were observed in the present study.

The present research demonstrates that education and income differ in how they function as social categories and identity bases. Incorporating socioeconomic status into one's self-concept does not solely depend on the salience of the category or the strength of the identification, but also on the social and psychological resources and benefits that such group memberships provide

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Appendix A

Syntaxes

Well-being variable raw score:

```
COMPUTE wellbeing_reversed=100 - ((wbwho_1 + wbwho_2 + wbwho_3 + wbwho_4 +
wbwho_5 - 5) * 4).
EXECUTE.
DESCRIPTIVES VARIABLES=wellbeing_reversed
  /STATISTICS=MEAN STDDEV MIN MAX.
```

Paired-samples t-tests hypothesis 1 and 2:

```
OUTPUT MODIFY
  /SELECT TABLES
  /IF COMMANDS=["Frequencies(LAST)"] SUBTYPES="Frequencies"
  /TABLECELLS SELECT=[VALIDPERCENT CUMULATIVEPERCENT]
APPLYTO=COLUMN HIDE=YES
  /TABLECELLS SELECT=[TOTAL] SELECTCONDITION=PARENT(VALID MISSING)
APPLYTO=ROW HIDE=YES
  /TABLECELLS SELECT=[VALID] APPLYTO=ROWHEADER UNGROUP=YES
  /TABLECELLS SELECT=[PERCENT] SELECTDIMENSION=COLUMNS
FORMAT="PCT" APPLYTO=COLUMN
  /TABLECELLS SELECT=[COUNT] APPLYTO=COLUMNHEADER REPLACE="N"
  /TABLECELLS SELECT=[PERCENT] APPLYTO=COLUMNHEADER REPLACE="%".
T-TEST PAIRS=id_edu fit_edu WITH ident_inc fit_inc (PAIRED)
  /ES DISPLAY(TRUE) STANDARDIZER(SD)
```

```
  /CRITERIA=CI(.9500)
  /MISSING=ANALYSIS.
```

Correlations:

```
CORRELATIONS
  /VARIABLES=fit_edu fit_inc id_edu ident_inc wellbeing_reversed
  /PRINT=TWOTAIL NOSIG FULL
  /STATISTICS DESCRIPTIVES
  /MISSING=PAIRWISE.
```

Regression self-esteem:

```
REGRESSION
  /DESCRIPTIVES MEAN STDDEV CORR SIG N
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA CHANGE
  /CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)
  /NOORIGIN
  /DEPENDENT selfesteem_scale
  /METHOD=ENTER ident_inc id_edu male
  /SCATTERPLOT=(*ZRESID ,*ZPRED)
  /RESIDUALS DURBIN HISTOGRAM(ZRESID) NORMPROB(ZRESID)
  /CASEWISE PLOT(ZRESID) OUTLIERS(3)
  /SAVE COOK.
```

Reliability analyses:

```
OUTPUT MODIFY
```

```
  /SELECT TABLES
  /IF COMMANDS=["Frequencies(LAST)"] SUBTYPES="Frequencies"
  /TABLECELLS SELECT=[VALIDPERCENT CUMULATIVEPERCENT]
APPLYTO=COLUMN HIDE=YES
  /TABLECELLS SELECT=[TOTAL] SELECTCONDITION=PARENT(VALID MISSING)
APPLYTO=ROW HIDE=YES
  /TABLECELLS SELECT=[VALID] APPLYTO=ROWHEADER UNGROUP=YES
  /TABLECELLS SELECT=[PERCENT] SELECTDIMENSION=COLUMNS
FORMAT="PCT" APPLYTO=COLUMN
  /TABLECELLS SELECT=[COUNT] APPLYTO=COLUMNHEADER REPLACE="N"
  /TABLECELLS SELECT=[PERCENT] APPLYTO=COLUMNHEADER REPLACE="%".
RELIABILITY
  /VARIABLES=master_r nosecondary_r mastnosec_r
  /SCALE('fit edu') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=MEANS.
  RELIABILITY
  /VARIABLES=ident_edu_1 ident_edu_2 ident_edu_3 ident_edu_4 ident_edu_5 ident_edu_6
ident_edu_7
  /SCALE('fit') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE CORR
```

```
  /SUMMARY=MEANS VARIANCE.
  RELIABILITY
  /VARIABLES=ident_inc_7 ident_inc_6 ident_inc_5 ident_inc_4 ident_inc_3 ident_inc_2
ident_inc_1
  /SCALE('ident income') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE CORR
  /SUMMARY=MEANS VARIANCE.
  RELIABILITY
  /VARIABLES=wbwho_1 wbwho_2 wbwho_3 wbwho_4 wbwho_5
  /SCALE('well-being') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE CORR
  /SUMMARY=MEANS VARIANCE.
  RELIABILITY
  /VARIABLES=selfesteem__1 selfesteem__2 selfesteem__3 selfesteem__4
  /SCALE('self-esteem') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE CORR
  /SUMMARY=MEANS VARIANCE.
  Error bar:
GRAPH
  /ERRORBAR(CI 95)=fit_edu fit_inc ident_edu id_inc
```

```
  /MISSING=LISTWISE.

  Regression:

REGRESSION

  /DESCRIPTIVES MEAN STDDEV CORR SIG N

  /MISSING LISTWISE

  /STATISTICS COEFF OUTS R ANOVA CHANGE

  /CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)

  /NOORIGIN

  /DEPENDENT wellbeing_reversed

  /METHOD=ENTER ident_inc id_edu male

  /SCATTERPLOT=(*ZRESID ,*ZPRED)

  /RESIDUALS DURBIN HISTOGRAM(ZRESID) NORMPROB(ZRESID)

  /CASEWISE PLOT(ZRESID) OUTLIERS(3)

  /SAVE COOK.
```