Universiteit Leiden

Screening for Openness to Diversity of Organisations:

Validation of a screener instrument that screens for (a lack of) openness to diversity within organisations.

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Abstract

This study investigates the predictive value, construct validity, and predictive validity of a screener instrument that screens for (a lack of) openness to diversity within an organisation. The study had a cross-sectional design. Employees of a Dutch government organization were participants in the study (N=874). The predictive value of the screener instrument was found to be good, because a ROC-analysis showed a significant area under the curve (AUC $\geq$ .80, $p<.05$). The construct validity was found to be good due to strong correlations between the screener instrument score and an inclusive culture score and an inclusion score. The predictive validity of the instrument was good because openness to diversity as measured with the screener instrument predicted job satisfaction, job stress, and turnover intent scores respectively. Implications, limitations, and suggestions of the study are discussed.

Keywords: Openness to diversity, lack of openness to diversity, Screener instrument, Screening, Organisations, Predictive value, Predictive validity, Construct validity

Introduction

The workforce of organisations is becoming more and more diverse due to immigration, new government policies, and corporations trying to gain a competitive advantage (Robinson & Dechant, 1997; Cohen, Gabriel & Terrell, 2002; Murphy, 2015; Centraal Bureau voor de Statistiek, 2016; The Diversity lnc. Foundation, 2017). The openness to diversity determines whether an organisation will flourish due to its diversity, or whether the organisation's growth will be hindered due to internal conflict and discrimination. Multiple studies show the positive and negative effects that openness to diversity can have on growth, future, and the internal situation, of organisations (Aalport, 1954; McCrae & Costa, 1985; Brewer, 1999; Härtel & Fujimoto, 2000; Von Bergen, Soper & Foster, 2002; Kochan et al., 2003; Homan et al., 2008).). Studies have yielded multiple instruments to determine openness to diversity (Homan et al., 2008; Plaut et al., 2011; Ashikali & Groeneveld, 2015). However, the literature currently lacks a instrument that can screen openness to diversity of an organisation. A screener instrument will allow researchers and business advisors to easily determine the openness to diversity of an organisation. Thus, this research has both scientific and practical value. The purpose of this study is to validate a screener instrument that diagnoses the openness to diversity of an organisation. In this thesis we will examine the predictive value, construct validity, and predictive validity of the new screener instrument.

The concept of openness to diversity

Openness to diversity concerns the way an organisation handles diversity and thereby effecting its employees and its results (Hobman, Bordia & Gallois, 2004). Research examining openness to diversity has suggested that openness to diversity can lead to employees feeling they have a great sense of belonging, they are appreciated for their diverse characteristics, or they are stimulated to be themselves within the organisation. On the other hand, a lack of openness to diversity can result in employees feeling they are ridiculed for their diverse characteristic, they are afraid to

speak their mind to others, or they are discriminated against within the organisation (Härtel & Fujimoto, 2000; Hobman, Bordia & Gallois, 2003; Van Knippenberg & Schippers, 2007).

Previous studies have investigated the consequences of openness to diversity. High levels of openness to diversity helps employees feel that they are accepted and valued. This in turn increases performance, job satisfaction and well-being of the workforce of an organisation (Ellis & Riggle, 1996; Barak & Levin, 2002; Hobman, Bordia & Gallois, 2003; Hobman, Bordia & Gallois, 2004; Allen et al., 2007; Homan et al., 2007; Pitts, 2009; Roberge & van Dick, 2010; Østergaard et al., 2011). Openness to diversity is especially important for innovative companies. Many studies have confirmed that there is a positive correlation between the amount of openness to diversity within an organisation and levels of innovative performance (Cox & Blake, 1991; Hobman et al., 2003; Homan et al., 2007 Roberge & van Dick, 2010; Østergaard et al., 2011). Furthermore, openness to diversity can increase information sharing between different members of a workgroup. This increase generally leads to better decisions and choices in a work context (Homan et al, 2008).

Conversely, a lack of openness to diversity will make employees feel ridiculed and discriminated against (Härtel & Fujimoto, 2000; Hobman et al., 2003; Van Knippenberg & Schippers, 2007) and result in an increase in turnover intent and job stress (Flanagan, 1978; Mays, Coleman & Jackson., 1996; Cunningham & Sagas, 2004; Stewart et al., 2011). Furthermore, a lack of openness to diversity regularly leads to intragroup conflict and personal stress (Hobman, Bordia & Gallois, 2003; Ayoko, 2007; Homan et al., 2007).

Thus, (lack of) openness to diversity of an organisation plays a role in the performance and well-being of its workers. However, the literature currently does not have an instrument that can easily determine the (lack of) openness to diversity within an organisation. This study validates a screener instrument that screens for the (lack of) openness to diversity within organisations.

Screener instruments

The purpose of a screener instrument is to screen a subject, with as few items as possible, to determine the absence or presence of an impairment (Gore et al., 2008; DeLapp et al., 2016; Boezeman et al., 2016). The subjects could be patients, employees, or organisations (Andresen et al. 1994; Hobman, Bordia & Gallois, 2004; Boezeman et al., 2016). Screener instruments are used in many fields of psychology to quickly assess a situation, like depression levels (Lwinsohn et al., 1997), cognitive impairments (Callahan et al., 2002), or work functioning (Boezeman et al., 2016). Unfortunately, there does not exist a screener instrument to assess openness to diversity until now, as we will validate a screener instrument to assess openness to diversity in this study.

One special characteristic of a screener instrument is the cutoff point that determines the absence or presence of an impairment. If a screener instrument score is above the cutoff point, the impairment is present. If the screener instrument score is below the cutoff point, the impairment is absent. This in turn results in a binary screener instrument score which codes for impairment absent (0) or present (1). A ROC analysis can assess the performance of the screener instrument and identify the optimal cutoff point for the purpose of the screener score (Hanley & McNeil, 1982; Conigrave, Hall, & Saunders, 1995; Streiner & Cairney, 2007). The predictive value, construct validity, and predicative validity are important psychometrical properties of a screener instrument. A golden standard instrument is needed in the examination of these psychometrical properties. A golden standard instrument is a previously validated instrument that is used as a benchmark for the screener instrument. (Gärtner et al., 2011; Boezeman et al. 2016).

Good predictive value involves a high match between the screener instrument score and the golden standard instrument score. The predictive value describes the likelihood that a certain result corresponds to the actual absence or presence of an impairment. Effectiveness indications of the predicative value of a screener instrument are the specificity, sensitivity, positive predictive value (PPV; amount of correct predicted subjects with the impairment divided by the total amount

of subjects diagnosed with the impairment), and the negative predictive value (NPV; amount of correct predicted subjects without the impairment divided by the total amount of subjects diagnosed without the impairment) (Gärtner et al., 2011; Field, 2013; Boezeman et al., 2016).

The construct validity involves whether the screener instrument indeed measures the psychological concept that it should measure. This is examined by inspecting the correlations between the screener instrument score and instruments that record the concept under examination. If correlations between the screener instrument and the other instruments are strong (r>.50), the construct validity is good (Gärtner et al., 2011; Field, 2013). The Cohen's conventions to assess correlations are used to determine and evaluate correlations and their strengths (Cohen, 1982).

Predictive validity involves whether the (lack of) openness to diversity as measured with the screener instrument can significantly predict psychological outcomes that theoretically result from (lack of) openness to diversity, like job satisfaction, job stress, and turnover intention. (Ellis & Riggle, 1996; Hobman, Bordia & Gallois, 2003; Cunningham & Sagas, 2004; Stewart et al., 2011; Gärtner et al., 2011; Field, 2013).

Minorities

Studies have shown that the viewpoint of minority group members on job satisfaction and exclusion can be different from the viewpoint of majority group members (Plaut et al., 2011; Choi, 2017). There is a possibility that minority group members have different viewpoints on (a lack of) openness to diversity than majority group members. This concern is reinforced by the way (a lack of) openness to diversity affects minority and majority group members differently. If an organisation has a lack of openness to diversity, especially the minorities are discriminated against. If an organisation is open to diversity, especially the minorities receive better treatment (Ellis & Riggle, 1996; Hobman, Bordia & Gallois, 2003; Van Knippenberg & Schippers, 2007). Minority group members could become experience experts of (a lack of) openness to diversity.

Therefore, it is possible that minority group members have a better insight into the level of openness to diversity of the organisation than majority group members.

Majority group members might not be as focused on openness to diversity than minority group members because it affects them less than minority group members (Plaut et al., 2011). Because majority group members are less affected by openness to diversity they might overestimate the level of openness to diversity of the organisation. Therefore, we expect the majority group to be more positive about the status of openness to diversity of the organisation than the minority group.

Furthermore, if minority group members are stronger affected by psychological outcomes that theoretically result from openness to diversity then majority group members, then this would supports the idea that minority group members are more affected by openness to diversity than majority group members. If this is the case, then we can conclude that minority group members are better at observing openness to diversity than majority group members and it would be better to measure openness to diversity with the screener instrument only among minority group members.

Inclusion

Inclusion involves the action of including people within a group of organisation (Jansen et al. 2014). People want to be included because this will give them a sense of belonging (Abrams, Hogg, & Marques, 2004). Inclusion results in people wanting to be part of a group or organisation and being accepted into the group. However, openness to diversity is more than inclusion and just acceptance. If an organisation is open to diversity, than diverse employees are valued and their special characteristics are actively used to create advantages (Hobman, Bordia & Gallois, 2004; Jansen et al., 2014). Furthermore, a lack of openness to diversity is worse than inclusion. If an organisation has a lack of openness to diversity, than there will be discrimination and minorities will be actively harmed (Mays, Coleman, & Jackson, 1996; Hobman Bordia & Gallois, 2004) .

These definitions suggest that inclusion is a state of an organisation between lack of openness to diversity and openness to diversity.

This perspective suggests that the concept of (a lack of) openness to diversity consist out of three domains; a lack of openness domain, an inclusion domain, and an openness domain. Figure 1 shows a graphical interpretation of this perspective. To investigate the possibility of three domains, we have to investigate two possible cutoff points. One cut-off point to screen for openness to diversity and one cut-off point to screen for a lack of openness to diversity. This would create three domains: a lack of openness domain (below the two cutoff points), an inclusion domain (between the two cutoff points) and an openness domain (above the two cutoff points). To determine if it makes sense to define these domains, we need to see if there are different scores between the domains for the psychological outcomes that theoretically result from openness to diversity. If this is the case, than the subjects in the three different domains react differently on the psychological concepts and this in turn could give more meaningful information about the openness to diversity score as measured with the screener instrument.

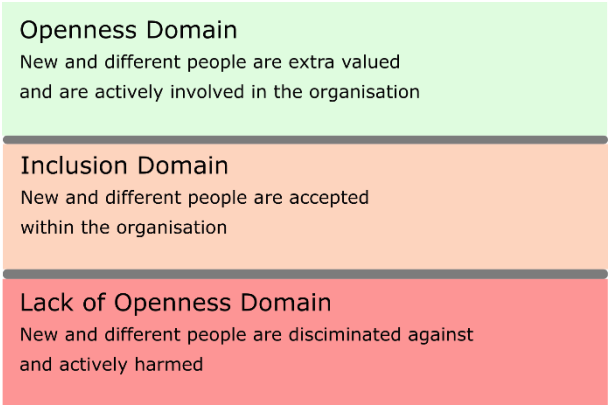

Figure 1. A graphical visualisation of the perspective of three different domains of openness to diversity. The grey lines represent two possible cutoff points for (a lack of) openness to diversity.

Aim of the research

The present study investigates the properties of a screener instrument that screens for (a lack of) openness to diversity. Based on the nature of openness to diversity, we expect majority group members to have a more positive perception of openness to diversity of an organisation than

minority group members [H1]. Furthermore, we expect correlations between the openness to diversity, as measured by the screener instrument, with psychological outcomes, that theoretically result from (a lack of) openness to diversity, like job satisfaction, job stress and turnover intention, to be stronger for the minority group than for the majority group [H2].

Golden standard instruments will be used to investigate the predictive value, the construct validity, and predictive validity of the screener instrument. The hypothesis is that the screener instrument will have a good predictive value (AUC>.50, p<.05) [H3a], a good construct validity (r>.50) [H3b], and good predictive validity [H3c]. All three psychometric properties will be investigated for two cutoff points; a cut off point for openness to diversity and a cut off point for a lack of openness to diversity.

The perspective of the concept of openness to diversity suggests three domains of openness to diversity; a lack of openness domain, an inclusion domain and an openness domain. Based on this perspective, we expect significant differences between the domains on the psychological outcomes, like job satisfaction, job stress and turnover intention that theoretically result from (lack of) openness to diversity [H4]. Since a lack of openness to diversity according to the literature leads to negative consequences, we expect the lack of openness domain to have higher scores for job stress and turnover intention and lower scores for job satisfaction than the inclusion domain and openness domain [H4a]. Since openness to diversity leads to more positive consequences than inclusion, we expect the scores for job satisfaction to be higher for the openness domain than for the inclusion domain but we expect no different scores for job stress and turnover intention between the two domains [H4b].

Method

Participants and design

The participants of the study were employees of a Dutch government organisation. An email was sent to 4000 employees to invite them to the study; 874 participants (352 males, 510 females; mean age= 46, SD= 12; mean hours employed=32, SD=5) responded to the emails and filled in the digital questionnaire, resulting in a response rate of 21,85 %. The questionnaire could be accessed by the participants in a time period of two weeks in the months of April and May of the year 2017. The study had a cross-sectional design. The ethics committee of the Social Sciences Department of the Leiden University has approved the research prior to the execution of the study. The demographic characteristics were determined through a set of general questions at the start of the questionnaire.

Procedure

Every participant was notified of the study through an internal email of the organisation. This email included an information letter which described the purpose of the study, the procedure of the study, and an informed consent form. When the participant gave their consent, the questionnaire was made digitally available for the participant through the use of the survey program Qualtrics (Qualtrics, Provo, Utah, USA). After the questionnaire was finished by the participant, it was digitally saved by the program. The participants did not receive any compensation in accordance with the wishes of the organisation. The data was stored and analysed in SPSS (IBM Corp., Armonk, NY, USA).

Screener instrument

The openness to diversity screener instrument consists of 12 items. The screener instrument has a bi-polar scale. With each item the participant could choose between two opposite work situations. On the left side of the screener instrument, work situations were described that can be linked to a lack of openness to diversity. On the right side of the screener instruments, work situations were described that can be linked to openness to diversity. Participants could also answer neutral if

they felt the situation of the organisation would be better than a lack of openness to diversity and worse than openness to diversity, resulting in inclusion. For example, participants could choose between 'visibly different people are less important at my job' vs. 'visibly different people are seen as valuable'. Participants were asked which description of a work situation was most applicable for their work situation. Participants could answer on a 7-point bi-polar scale (1-3: agree with a certain extent to the left work situation, 4=neutral, 5-7: agree with a certain extent to the right work situation). Due to confidentiality reasons, the screener instrument is not in the thesis. If one wants to examine the items of the screener instrument, one needs to get into contact with dr. Edwin Boezeman.

Examine the predictive value of the screener instrument

To determine the predictive value of the screener result, a golden standard instrument is needed. The openness to diversity instrument of Hobman, Bordia & Gallois (2004) was used as the golden standard instrument to validate the screener instrument. The instrument by Hobman, Bordia & Gallois (2004) consisted of 6 items, its answering possibilities consisted out of a 7-point bi-polar scale and it had a Cronbach's alpha of .88. The instrument of Hobman, Bordia & Gallois (2004) can be found in appendix D. The 6 items of the instrument by Hobman, Bordia & Gallois (2004) were recoded into a binary score that translated into the absence or presence of (a lack of) openness to diversity. All participants with a higher score for the instrument of Hobman, Bordia & Gallois (2004) than 24 were quantified as participants that observed the openness to diversity of the organisation. All participants with a lower score for the instrument of Hobman, Bordia & Gallois (2004) than 6 were quantified as participants that observed the lack of openness to diversity of the organisation. The recoded instrument scores of Hobman, Bordia & Gallois (2004) were used to examine the ROC and the predictive value of the screener instrument.

Examine the construct validity of the screener instrument

Good construct validity is indicated by strong correlations (r>.50) with instrument scores that measure similar psychological concepts. To examine the construct validity the inclusive culture instrument of Ashikali and Groeneveld (2015) and the inclusion instrument of Jansen et al. (2014) were used. The inclusive culture instrument consists of 6 items and has a Cronbach's alpha of .89. The inclusion instrument consists of 16 items and 4 subscales that asks about how people within the organisation treat the participant. The Cronbach's alpha of the inclusion instrument is .82. The Dutch items of both instruments can be found in the appendix.

Examine the predictive validity of the screener instrument

To examine the predicative validity of the screener instrument, we need to determine if the openness to diversity score, as measured with the screener instrument, can predict psychological outcomes that theoretically should result from openness to diversity. Job satisfaction, job stress and turnover intention are the psychosocial outcomes that should theoretically be effected by openness to diversity and are used to determine the predictive validity. Job satisfaction is measured by the 3 item scale of Mitchel et al. (2001) with a Cronbach's alpha of .85**.** Job stress is measured by the 6 item scale of Hadzibajramovic et al. (2015) with a PSI (Person Separation Index, similar effect size as Cronbach's alpha) of .80. Turnover intention is measured by the 4 item scale of Van Veldhoven and Meijman (1994) with a Cronbach's alpha of .82. The Dutch version of the instruments can be found in the appendix.

Results

Minority and majority differences

The first hypothesis of the study states that majority group members have a more positive viewpoint on openness to diversity than minority group members [H1]. The data provides evidence for this hypothesis. A student t-test between majority and minority group members gave a significant result ($t(863)=5.571$, $p<.001$) for the screener instrument score. Majority group members (M=42.70 SD=10.36) gave significantly higher scores for the openness to diversity than

minority group members (M=38.18, SD=13.28). The result shows that majority group members are indeed more positive about the level of openness to diversity of the organisation than minority group members, as predicted.

The second hypothesis of the study states that the correlations between openness to diversity and psychological outcomes like job satisfaction, job stress and turnover intention should be stronger for minority group members than majority group members [H2]. The correlations confirm this hypothesis. The correlations between the screener score and the job satisfaction ($r=.25$, $p<.01$), job stress ($r=.16$, $p<.01$), and turnover intention ($r=-.085$, $p<.01$) scores for the majority group members are weak. The correlations between the screener score and the job satisfaction ($r=.39$, $p<.01$), job stress ($r=.34$, $p<.01$), and turnover intention ($r=-16$, $p<.01$) scores for the minority group members are moderate, and stronger than the correlation for the majority group. The correlations are shown in table 1. A r-to-z Fischer transformation is used to assess the differences between the correlations of the majority and minority group members. The differences between the correlations are significant for job satisfaction ($z=2.34$, $p<.01$) and job stress ($z=2.76$, $p<.01$).

Taken together, the results show that majority group members are generally more positive about the level of openness to diversity as minority group members. Furthermore, the correlations show that minority group members are more affected by psychological outcomes that theoretically result from openness to diversity. The results supports the idea that minority members have a different and more accurate viewpoint on (a lack of) openness to diversity than majority members. Based on this information we think that if one want to measure openness to diversity as accurate as possible, one should only use information from minority group members. Therefore, we have decided to base the validation of the screener instrument only on information from minority group members.

Table 1
Correlations between screener scores and job satisfaction, job stress, and turnover intention.

	Correlation coefficient of the majority group members.	Correlation coefficient of the majority group members.	Fisher r-to-z transformation
Job satisfaction	.245*	.393*	z=2.34*
Job stress	.155*	.340*	z=2.76*
Turnover intention	-.085*	-.164*	z=1.14

* p<.01

Cutoff points

To determine the cutoff points of the screener instrument with the best possible combination of specificity and sensitivity (Streiner & Cairney, 2007; Boezeman, et al., 2016), we performed ROC analyses. For the ROC analyses we used the openness to diversity instrument from Hobman, Bordia & Gallois (2004) as the golden standard instrument. The ROC analysis for a cut off point for openness to diversity resulted in a high AUC (=.87 >.50, p<.001). The optimal cut-off point for openness to diversity was found to be 66.0 with the ROC-analysis. The ROC analysis for a cut off point for a lack of openness to diversity resulted in a high AUC (=.91 >.50 ,p<.001). The optimal cut-off point for a lack of openness to diversity was found to be 32.60 with the ROC-analysis. Taken together, the cut off points suggest that scores above 66.0 can linked to openness to diversity and scores lower than 32.6 can be linked to a lack of openness to diversity.

Predictive value

The first hypothesis that concerns the psychometric properties of the screener instrument states that the screener instrument has a good predictive value [H3a**]**. The hypothesis is supported by the data. As previously mentioned, ROC-analyses were performed for the screener instrument score and the golden standard instrument score. The ROC analysis for the screener score assessing

openness to diversity resulted in a significant AUC (=.87 >.50, p<.001) and a cutoff point at 66.0 (positive predictive value: 32.86 %, negative predictive value: 97.23%). For the cutoff point to determine the openness to diversity, a positive result (the impairment) corresponded to the existences of openness to diversity of the organisation. If the score of the screener instrument is higher than 66.0, it is a positive result (impairment present) and there is a 32.86 % chance of openness to diversity of the organisation. If the score of the screener instrument is lower than 66.0, it is a negative result (impairment absent) and there is a 97.23 % chance there is no openness to diversity of the organisation. The ROC analysis for the screener instrument, recoded into a binary score, assessing openness to diversity resulted in a significant AUC(=.80>.50, p<.001). Both ROC curves for openness to diversity have a significant AUC and are shown in figure 2.

The ROC analysis for the screener instrument score assessing a lack of openness to diversity resulted in a significant AUC (=.91 >.5, p<.001) and a cutoff point at 32.6 (positive predictive value: 43.87 %, negative predictive value: 98.23 %). For the cutoff point to determine the lack of openness to diversity, a positive result (the impairment) corresponded to the existences of lack of openness to diversity of the organisation. If the score of the screener instrument is lower than 32.6, it is a positive result (impairment present) and there is a 43.87 % chance of a lack of openness to diversity of the organisation. If the score of the screener instrument is higher than 32.6, it is a negative result (impairment absent) and there is a 98.23 % chance there is no lack of openness to diversity of the organisation. The ROC analysis for the screener instrument, recoded into a binary score, assessing a lack of openness to diversity, resulted in a significant AUC (=.85 >.50, p<.001). Both ROC curves for a lack of openness to diversity have a significant AUC and are shown in figure 3. The results of all ROC analyses are summarized in table 2. The AUC of all ROC analyses of (a lack of) openness to diversity are significant and larger than .50. Therefore, we conclude that the predictive value of the screener instrument is good.

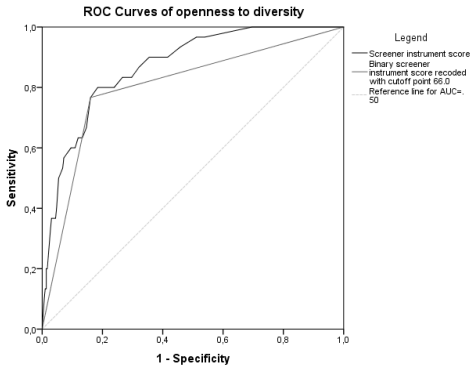

Figure 2. The ROC curves of openness to diversity as measured by the screener instrument score (AUC = .870 > .50, p<.001) and by the binary screener instrument score with a cutoff point at 66.0 (AUC=.803 >.50, p<.001).

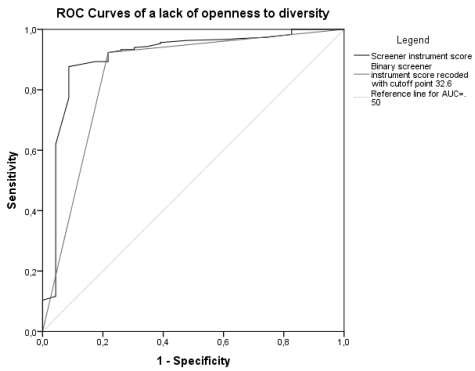

Figure 3. The ROC curves of a lack of openness to diversity as measured by the screener instrument score (AUC = .870 > .50, p<.001) and by the binary screener instrument score with a cutoff point at 36.2 (AUC=.803 >.50, p<.001).

Table 2
The predictive properties for the two cut off points for (a lack of) openness to diversity.

Case	Cutoff point	Sensitivity	Specificity	AUC	NPV	PPV
Cut off point for openness to diversity	66.0	76.7%	84.0%	.870*	97.2%	32.8%
Cut off point for a lack of openness to diversity	32.6	78.3 %	92.3%	.909*	98.2%	43.9%

* p < .001

Construct validity

The second hypothesis that concerns the psychometric properties of the screener instrument states that the screener instrument has a good construct validity [H3b]. This hypothesis could be confirmed if the correlations of the screener instrument score with the inclusive culture instrument score of Ashikali and Groeneveld (2015) and the inclusion instrument score of Jansen et al. (2014) are strong.

The correlation of the screener instrument score with the inclusive culture instrument score (r=.69, p<.01) and the inclusion instrument score (r=.67, p<.01) are strong. The correlation of the recoded binary screener instrument score assessing openness to diversity with the inclusive

culture instrument score (r=.39, p<.01) and the inclusion instrument score (r=.39, p<.01) are moderately strong. The correlation of the recoded binary screener instrument score assessing a lack of openness to diversity with the inclusive culture instrument score (r=-.56, p<.01) and the inclusion instrument score (r=-.51, p<.01) are strong. The correlations between the instrument scores can be found in table 3. Based on these findings, we can conclude that the screener instrument has a good construct validity.

Predictive validity

The third hypothesis that concerns the psychometric properties of the screener instrument states that the screener instrument has a good predictive validity [H3c]. This hypothesis is supported by the data. The regression analysis shows that openness to diversity as measured with the screener instrument can significantly predict job satisfaction ($F(1,323)=59.09$, $p_F<.0001$, $\beta=.39$, $p_\beta<.001$, $R^2=.16$), job stress ($F(1,310)=40.64$, $p_F<.0001$, $\beta=.34$, $p_\beta<.001$, $R^2=.12$) and turnover intention ($F(1,323)=8.94$, $p_F<.005$, $\beta=-.16$, $p_\beta<.005$, $R^2=.03$). An regression analysis with the recoded binary screener instrument score assessing openness to diversity as independent variable shows an significant prediction of job satisfaction ($F(1,323)=22,00$, $p_F<.0001$, $\beta=.25$, $p_\beta<.001$, $R^2=.06$) and job stress ($F(1,310)=8.89$, $p_F<.0001$, $\beta=.17$, $p_\beta<.001$, $R^2=.03$). The regression analysis with the recoded binary screener instrument score assessing a lack of openness to diversity resulted in a significant prediction for job satisfaction ($F(1,323)=46.67$, $p_F<.0001$, $\beta=-.36$, $p_\beta<.001$, $R^2=.12$), job stress ($F(1,310)=35.53$, $p_F<.0001$, $\beta=-.32$, $p_\beta<.001$, $R^2=.10$), and turnover intention ($F(1,323)=9.82$, $p_F<.005$, $\beta=.17$, $p_\beta<.005$, $R^2=.03$). The results of all regression analyses can be found in table 4. The regression analyses show that openness to diversity as measured with the screener instrument can predict psychological outcomes that theoretically should result from

openness to diversity like job satisfaction, job stress and turnover intention. Therefore we can conclude that the predictive validity of the screener instrument is good.

Table 3
The correlations between the different screener scores and two inclusion instruments to investigate the construct validity of the screener instrument.

	Inclusive culture instrument	Inclusion instrument
0-100 screener score	.685*	.667*
Openness to diversity binary screener score	.399*	.385*
A lack of openness to diversity binary screener score	-.560*	-.505*

* p<.01

Table 4
The results of the regression analyses between different screener scores and job satisfaction, job stress, and turnover intention

Dependent variable	Independent variable	F-statistic (df)	β	t-statistic	R^2
Job Satisfaction	Screener score	59.09 *** (1,323)	.393	7.69 ***	.155
	Binary screener score for openness to diversity	22.00 *** (1,323)	.253	4.69 ***	.064
	Binary screener score for a lack of openness to diversity	46.67 *** (1,323)	-.355	-6.83 ***	.124
Job Stress	Screener score	40.64 *** (1,310)	.340	6.38 ***	.116
	Binary screener score for openness to diversity	8.89 *** (1,310)	.167	2.98 ***	.028
	Binary screener score for a lack of openness to diversity	35.53 *** (1,310)	-.321	-5.96 ***	.103
Turnover intention	Screener score	8.94 ** (1,323)	-.164	-2.99 **	.027
	Binary screener score for openness to diversity	2.875 * (1,323)	-.094	-1.70 *	.009
	Binary screener score for a lack of openness to diversity	9.822 ** (1,323)	.172	3.13 **	.030

df: degree of freedom
* p=.091, ** p<.005, *** p<.0001

The perspective of three domains

The last hypothesis of the study concerns the perspective of the three domains; a lack of openness domain (any score below 32.6), inclusion domain (any score between 32.6 and 66.0), and openness domain (any score above 66.0). Figure 4 give a graphical representation of the domains. The hypothesis states that we expect different scores for psychological outcomes that theoretically result from (a lack of) openness to diversity, like job satisfaction, job stress and turnover intention, between the three domains [H4]. One-way between subject ANOVA's were conducted to compare the three domains on psychological outcomes that theoretically result from openness to diversity. The results from the ANOVA's can confirm the hypothesis. Planned comparisons are used to see if the lack of openness domain has higher scores for job stress and turnover intention and lower scores for job satisfaction than the inclusion domain and openness domain [H4a]. Furthermore, planned comparisons are used to see if the openness domain has a higher score for job satisfaction and similar scores for job stress and turnover intention as the inclusion domain [H4b]. Table 5 shows the results of the one-way ANOVA's and table 6 shows the corresponding planned comparisons.

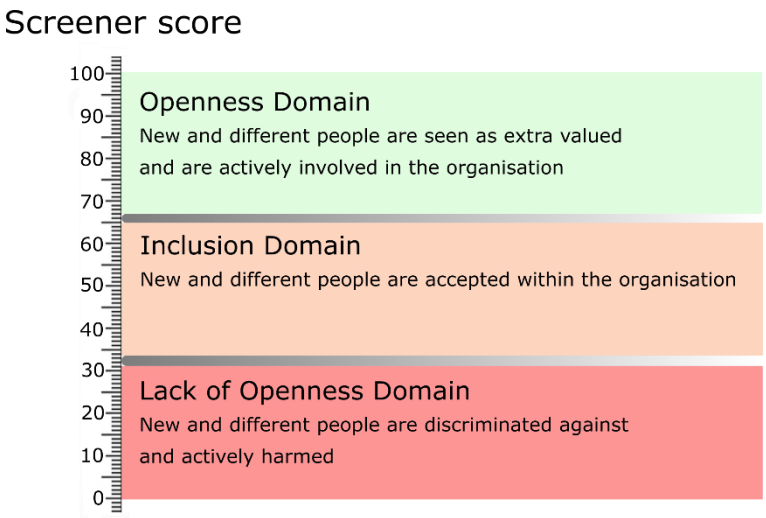

Figure 4. A graphical visualisation of the perspective of three different domains of openness to diversity. The grey lines represent two cutoff points for (a lack of) openness to diversity at 66.0 and 32.6.

The ANOVA with job satisfaction as an outcome showed a significant effect ($F(2,322)=30.82$, $p<.001$). The planned comparison for job satisfaction indicated that the mean score of subjects in

the openness domain (M=84.76, SD=13.47) was significantly higher than the mean score of subjects in the inclusion domain (t(322)=3.63, p<.005, M=76.06, SD=17.92) and in the lack of openness domain (t(322)=7.83, p<.005, M=57.99, SD=20.22). The mean score of the subjects in the inclusion domain was significantly higher than for in the lack of openness domain (t(322)=6.10, p<.005). Taken together, these results suggest that job satisfaction score increases as the scores of the screener instrument increase and reach higher level domains, as shown in figure 5. The results fit with the idea that a lack of openness to diversity has worse consequences than inclusion and openness to diversity and openness to diversity creates added value compared with inclusion.

The ANOVA of the job stress score with the domains as factor (F (2,309)=19.83, p<.001) shows a significant result, which indicates that there is a difference of the job stress score between the domains. The planned comparisons for job stress indicated that mean scores of subjects in the openness domain (t(309)=6.13, p<.005, M=35.46, SD=18.96) and in the inclusion domain (t(309)=5.472, p<.005, M=40.47, SD=17.23) were lower than in the lack of openness domain (M=58.12, SD=23.21). However, the mean score of subjects in the inclusion domain score did not significantly differ from the mean score of subjects in the openness domain score. Taken together, the results suggest that the inclusion domain and openness domain yield lower scores for job stress than the lack of openness domain, see figure 6, but there are no significant differences between the scores in the inclusion domain and openness domain. This fits with the idea that a lack of openness to diversity has more negative consequences than inclusion or openness to diversity. Furthermore, it fits with the idea that there are no difference in negative consequences between inclusion and openness to diversity.

The ANOVA of the turnover intention score with the domains as factor (F (2,322) =5.53, p<.005) shows a significant result, which indicates that there is at least one difference between the domains for the turnover intention score. The planned comparisons for turnover intention showed that the mean score of subjects in the lack of openness domain (M=55.49, SD=38.12) have higher

scores than in the inclusion domain ($t(322)=-2.85$, $p<.005$,$M=38.55$, $SD=34.14$) and in the openness domain ($t(322)=-3.25$, $p<.005$,$M=33.21$, $SD=35.03$). However, the planned comparison for turnover intention between the scores in the inclusion domain and in the openness domain was not significant. Taken together, the results suggest that the inclusion domain and openness domain yield lower scores for turnover intention than the lack of openness domain, see figure 7, but there is no difference in turnover intention score between subjects in the inclusion domain and in the openness domain. This fits with the idea that a lack of openness to diversity has more negative consequences than inclusion or openness to diversity, but there is no difference in negative consequences between the inclusion and openness to diversity.

Based on the results of the ANOVA's and planned comparisons we can conclude that there are three different domains of openness to diversity. The lack of openness domain yield higher scores for job stress and turnover intention and lower scores for job satisfaction than the inclusion and openness domains. This was expected since a lack of openness to diversity results in more negative consequences than the other two domains. The openness domain yield a higher mean score for job satisfaction than the inclusion domain, but similar mean scores for job stress and turnover intention. This fits with the idea that openness to diversity creates extra value for the employees, for example an increase in job satisfaction, compared to inclusion but the negative psychological concepts are not affected.

However, it is important to note that a certain domain is not the same as a certain level of openness to diversity. If the score of a subject belongs to a certain domain, for example the lack of openness domain, it does not automatically means that the subject score corresponds to a certain amount of openness to diversity, for example a lack of openness to diversity. The domains are based on the cutoff points and NPV and PPV of the cutoff points determine the likelihood that a certain score corresponds to a certain level of openness to diversity. For example, a score above 66.0 falls in the openness domain, but the PPV of the cutoff point is 32.83%, therefore the likelihood a score above 66.0 corresponds to openness to diversity is slightly above 30%. Figure

8 gives a summary of the interpretation of the screener instrument score taking the NPV and PPV of both cutoff points into account. A careful explanation of the deduction of the percentages used in figure 8 can be found in appendix.

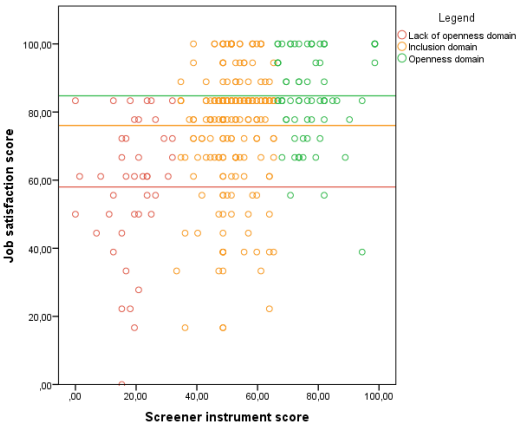

Figure 5. A scatterplot of the screener instrument score on the x-axis and job satisfaction score on the y-axis. The three possible domains are colour coded, see the legend. The lines in the figure visualise the average score of all subjects in a domain.

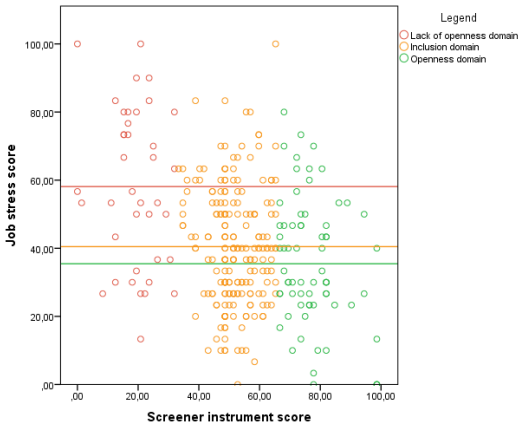

Figure 6. A scatterplot of the screener instrument score on the x-axis and job stress score on the y-axis. The three possible domains are colour coded, see the legend. The lines in the figure visualise the average score of all subjects in a domain.

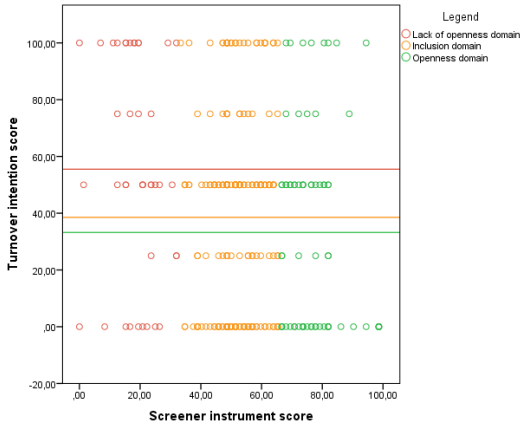

Figure 7. A scatterplot of the screener instrument score on the x-axis and turnover intention score on y-axis. The three possible domains are colour coded, see the legend. The lines in the figure visualise the average score of all subjects in a domain.

Table 5
The F-statistics of the one-way ANOVA of job satisfaction, job stress and turnover intention with the three openness to diversity domains as factor.

Dependent variable	Degree of freedom	F-statistic	p-value
Job satisfaction	2,322	30.819	p<.00001
Job stress	2,309	19.831	P<.005
Turnover intention	2,322	5.533	p<.00001

* p < .001

Table 6
The planned comparisons of the ANOVA of job satisfaction, job stress and turnover intention with the three openness to diversity domains as factor.

Dependent variable	Variable 1	Variable 2	t-statistic
Job satisfaction	Lack of openness	Inclusion	6.097 (322)*
	Lack of openness	Openness	7.829 (322)*
	Inclusion	Openness	3.633 (322)*
Job stress	Lack of openness	Inclusion	5.472 (309)*
	Lack of openness	Openness	6.130 (309) *
	Inclusion	Openness	1.952 (309) +
Turnover intention	Lack of openness	Inclusion	-2.851 (322) *
	Lack of openness	Openness	-3.250 (322)*
	Inclusion	Openness	-1.112 (322) ++

+ p> .05 ++ p > .250
*p<.005

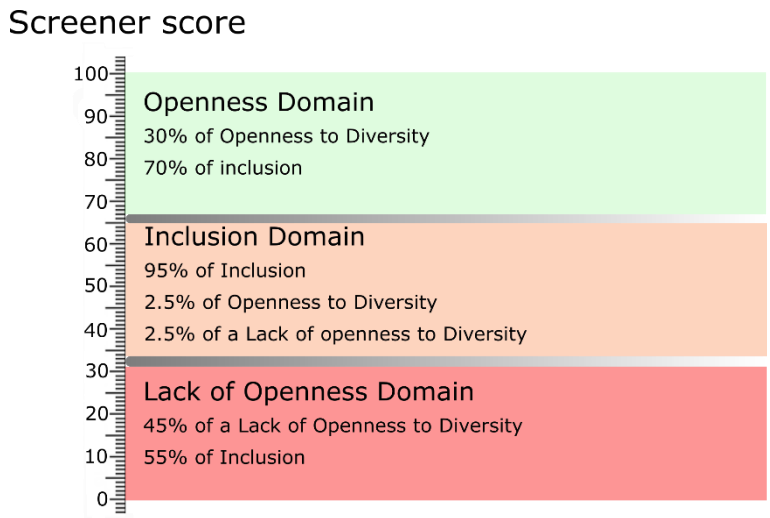

Figure 8: graphical visualisation of the different domains of openness to diversity. If a score is lower than 32.6 there is a chance of 45% there are severe problems within an organisation due to the lack of openness to diversity. If a score is between 32.6 and 66.0, there is a 95 % chance there is only inclusion within the organisation. If the score is higher than 66.0, there is a 30% chance openness to diversity causes an added value to the organisation.

Discussion

The first hypothesis of this study stated that majority group members have a more positive perception of openness to diversity of the organisation than the minority group members. The openness to diversity score as measured with the screener instrument was significantly higher for majority group members than for minority group members according to a t-test. The second hypothesis of the study stated that the correlations between openness to diversity score, as measured with the screener instrument, and the psychological outcomes, that theoretically result from openness to diversity, are stronger for minority group members than for majority group members. The result of a Fischer r-to-z transformation supported the second hypothesis as the correlations of minority group members were significantly stronger than the correlations of majority group members. the two supported hypotheses implied that minority group members were more keen on openness to diversity. Therefore, we decided that the validation of the screener instrument should only depend on information from the minority group members.

The first hypothesis that concerns the psychometrical properties of the screener instrument stated that the screener instrument has a good predictive value. The ROC-analyses of screener

instrument score all had an AUC above .80. We concluded that the screener instrument has a good predictive value. The second hypothesis that concerns the psychometric properties of the screener instrument stated that the screener instrument has a good construct validity. The correlations between normal and binary screener instrument scores and the scores of two instruments measuring similar psychological concepts were strong. Based on these findings, we concluded that the construct validity of the screener instrument was good. The third hypothesis that concerns the psychometric properties of the screener instrument stated that the screener instrument has a good predictive validity. The regression analyses of screener instrument scores and psychological outcomes that theoretically result from openness to diversity resulted in significant regression coefficients. Therefore, a good predictive validity of the screener instrument was found.

After the validation of the screener instrument, we examined the existent of the three domains; a lack of openness domain, inclusion domain and an openness domains. The domains were based on the two cutoff points. Any score below 32.6 belonged to the lack of openness domain. Any score between 32.6 and 66.0 belonged in the inclusion domain. Any score above 66.0 belonged in the openness domain. The fourth hypothesis stated that there are differences between the domains in the scores of the psychological outcomes that theoretically result from openness to diversity. Furthermore, we expected the lack of openness domain to yield lower scores for job satisfaction and higher scores for job stress and turnover intention than the inclusion and openness domains, because a lack of openness to diversity is stronger related to negative consequences than inclusion and openness to diversity. We also expected the openness domain to yield higher scores for job satisfaction and similar scores for job stress and turnover intention as the inclusion domain, because openness to diversity is stronger related to positive consequences than inclusion. The hypotheses were confirmed by the results from one-way between subject ANOVA's and planned comparisons. Taken together, we found evidence that support the idea that there are three domains, where a lack of openness domain yield lower scores for job satisfaction and higher

scores for job stress and turnover intention than inclusion and openness domain, and where the openness domain yield higher scores for job satisfaction and similar scores for job stress and turnover intention than inclusion domain. Figure 8 gives an overview of how scores of the screener instrument correspond to a certain level of openness to diversity.

Implications of the research

The greatest contribution of this study to the literature is the validation of a new screener instrument that screens the level of openness to diversity of an organisation. In many fields of psychology, screening instruments are frequently used to assess situations, like intelligence, depression, and adaptive behaviour, quickly (Lewinshown et al., 1997; Campbell, Bell, & Keith, 2001; Van Duijn et al., 2009). However, until now there was no instrument that could quickly assess the level of openness to diversity of organisations. Previous instruments examined individual viewpoints (Hobman, Bordia & Gallois, 2004), openness to diversity cultures (Plaut, et al., 2011.), or similar psychological concepts (Jansen et al., 2014; Ashikali & Groeneveld, 2015) of openness to diversity. But there was not yet a screener instrument that measures openness to diversity available in the literature. Through this study, we showed the validation of a screener instrument that measures openness to diversity. Furthermore, through cutoff points we can quickly gain insights into the level of openness to diversity of an organisation. In conclusion, the study contributed a new screener instrument to the literature that measures openness to diversity.

The study shows that there is a difference in the openness to diversity score as measured with the screener instrument between minority and majority group members. In general, minority group members reported lower scores for openness to diversity than majority group members. Correlations between openness to diversity score as measured with the screener instrument and psychological outcomes that theoretically result from openness to diversity, like job satisfaction, job stress, and turnover intention, were stronger for minority group members than for majority group members. These results fit with the idea that minorities are stronger affected by openness

of diversity and its consequences. These findings provide support for the idea that minority group members are keener on openness to diversity than majority group members. Previous studies have confirmed that minority group members observe different levels of job satisfaction and exclusion (Plaut et al., 2011; Choi, 2017). The study provides evidence that openness to diversity can also be seen as psychological concepts for which it matters if the subject is part of a minority group or not. Usually, instruments that measure openness to diversity determine the level of openness to diversity based on all participants (Hobman, Bordia & Gallois , 2004; Plaut et al., 2011). The findings of this study show that this might not be the best possible method to examine openness to diversity because there is a differences in the openness to diversity perspective of minority and majority group members. Based on the findings in this study, openness to diversity should only be measured through minority group members.

A practical implication of this study is the potential use of the screener instrument for organisations. Organisations can use the screener instrument to diagnose the openness to diversity of their organisation and determine if they can further improve the level of openness to diversity. To use the screener instrument, all employees need to be asked to fill in the screener instrument and asked whether they feel they are part of the minority group within the organisation. To assess the level of openness to diversity of the organisation, one only needs to look at the score of the minority group members. Figure 8 allows organisations to assess their level of openness to diversity based on which domain the scores of their employees belong to. The domains give an indication of the situation within the organisation. If an organisation scores higher than 66.0, the organisation is open to diversity (with 30% certainty) or inclusive (with 70% certainty). If an organisation scores between 32.6 and 66.0, than an organisation is probably (with 95% certainty) inclusive with no real positive or real negative consequences. If an organisation scores below 32.6, than an organisation has a lack of openness to diversity (with 45 %) or the organisation is inclusive (with 55% certainty). Through the screener instrument score, an organisation can easily

get insights into the level of openness to diversity of the organisation and determine whether they need to take immediate action to counter negative results, or to increase positive results.

Limitations and suggestions for future research

One limitation of this study concerns the generalizability of its findings. The organisation investigated in this study is a government agency. Previous studies have shown that there are significant differences in job motivation and other psychological concepts between employees in the private and public sectors (Karl & Sutton, 1998; Boyne, 2002; Buelens & Van den Broeck, 2007). Therefore, the cutoff points, predictive value, construct validity and predictive validity of the screener instrument may be different for organisations in the private sector. This study is limited by the amount and kind of organisations that were used to validate the screener instrument. Further studies into openness to diversity and the screener instrument can focus on different organisations and determine the validity of the screener instrument for other types of organisations. Other organisations that could be investigated are fortune 500 companies, SME companies or non-profit organisations. Future studies that investigate other forms of organisations would improve the validity of our screener instrument.

Another limitation of the study is due to the self-reportage nature of this study. Participants of the study were asked to partake in this study as part of their job. This could result in participants responding in a socially desirable way (Grimm, 2010), causing a social desirability bias that might affect the validity of the screener instrument. Furthermore, approximately ¼ of the respondents reacted on the invitation to participated in the study. It is plausible that only employees responded that were very dissatisfied or very satisfied with the organisation, causing a sample bias that might influence the validation of the screener instrument (Berk, 1983). Unfortunately, this limitation cannot be prevented when a questionnaire is made digitally available for participants. However, investigations by Spector and its team show that the bias effects will not drastically affect the validation of an instrument and are only responsible for small distortions (Spector, 1987; Spector, Fox & Katwyk, 1999; Spector, 2006). Therefore, the

bias effect can be ignored as long as new studies do not show that a bias effect might be a reason of concern for the validation of a screener instrument.

To validate a screener instrument, one needs to base the validation process on a previously validated instrument, the golden standard instrument. In this study, the openness to diversity instrument of Hobman, Bordia & Gallois (2004) was used as the golden standard instrument to validate the screener instrument. Unfortunately, the instrument of Hobman, Bordia & Gallois (2004) is specifically made to determine the level of openness to diversity and not inclusion or a lack of openness to diversity. Therefore, one could raise some questions about the procedure and choice of the golden standard instrument, although the results complete fit in the picture of the existence of the three domains. Fortunately, there are other instruments like the diversity endorsement instrument by Plaut et al. (2011) or the Universality Diversity Scale by Miville et al. (1999) that could be used to validate the screener instrument. Future studies could use these different instruments as the golden standard instrument to further validate the screener instrument.

Further studies could investigate different psychological outcomes that theoretically result from openness to diversity, other than job satisfaction, job stress and turnover intention. Although the statistical tests with job satisfaction and job stress as outcomes confirmed all the hypotheses, there are many more psychological concepts that can confirm and support the results of this study. Furthermore, any investigation into turnover intention had mostly significant but weak results. Turnover intention is effected by much more psychological concepts than openness to diversity (Spector & Jex, 1991; Egan, Yang, & Bartlett, 2004; Ali, 2008), which is why it is not surprising that the results were not as clear for turnover intention as the results for job satisfaction and job stress. It might be worthwhile to investigate perceived innovation (Bassett-Jones, 2005; Chiang & Hung, 2010), discrimination (Härtel & Fujimoto, 2000; Hanassab, 2006) and belongingness (Summers et al., 2002; Johnson et al., 2007) as psychological outcomes since these psychological outcomes should also be (partly) influenced by (a lack of) openness to diversity.

Further studies can investigate whether other psychological outcomes can be predicted by the openness to diversity score as measured with the screener instrument. If these studies find significant results than the studies would provide more evidence that support the predictive validity of the screener instrument. Furthermore, these studies could give more meaning to the screener instrument scores by finding evidence of links between other psychological concepts and openness to diversity as measured with the screener instrument score.

The scores of the screener instrument do not 100% accurately describe the situation within an organisation due to the NPV and PPV of the cutoff points. Future studies could investigate the possibility of a two-step procedure to help organisations with their openness to diversity. The first step would be to use the screener instrument and determine the domain of the organisation. The second step would depend on the domain. If an organisation finds its scores to be in the lack of openness domain, further studies could investigate whether their scores truly correspond to a lack of openness to diversity and what an organisation needs to change to establish a higher level of openness to diversity. If an organisation receives scores in the inclusion domain, further studies can investigate how organisations that accept employees could generate an advantage due to their diversity. If an organisation scores within the openness domain, future studies could investigate if the result of the screener instrument indeed correspond with openness to diversity and how an organisation can safe keep its openness to diversity. Any of these future studies would enable organisation to make full use of the screener instrument.

In conclusion

The newly validated openness to diversity screener instrument can identify three key domains of openness to diversity of organisations. The screener instrument can help organisations measure their openness to diversity and determine if an organisation has problems due to mismanagement of their openness to diversity or if they receive added value due to correct management of their openness to diversity.

Acknowledgements

It took almost eight months to finish the final version of my thesis, but I made it. I can still remember my first meeting of this project. Together with Wouter, I waited until Edwin walked to our table at the second floor with his cola in his hand. During the last eight months, this became a familiar sight.

Our group consisted out of Edwin and four students, Wouter, Ellianne, Lisanne, and myself. I learned a lot form our group's discussions, where I continuously gained new insights. During our sessions, I also had fun. Especially with the dry remarks of Edwin which always hit the target.

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Appendix

Appendix A: Dutch general questions of the questionnaire

Algemene vragen

Wat is uw geslacht?
O Man
O Vrouw
O Geen antwoord

Wat is uw leeftijd?:

Bij welk onderdeel van de gemeente bent u werkzaam?:

Bij welke afdeling van de gemeente bent u werkzaam?:

Hoeveel jaar bent u al in dienst bij de gemeente?:

Hoeveel uur per week doet u betaald werk bij de gemeente?:

Bent u leidinggevende?
O Ja
O Nee

Bent u trainee bij de gemeente
O Ja
O Nee

Wat is uw hoogst genoten opleiding?
O Basisschool
O Middelbare school
O Lager Beroepsonderwijs (LBO)
O Middelbaar Beroepsonderwijs (MBO)
O Hoger Beroepsonderwijs (HBO)
O Wetenschappelijk Onderwijs (WO)
O Anders, namelijk

Wat betreft zichtbare kenmerken (bv. leeftijd, geslacht, etniciteit) ben ik op het werk volgens mij zichtbaar anders dan de meesten
O Ja, want
O Enigszins
O Nee

Wat betreft onzichtbare kenmerken (bv. voorkeur, overtuigingen) ben ik op het werk volgens mij onzichtbaar anders dan de meesten
O Ja, want
O Enigszins
O Nee

Appendix B: Dutch version of the Openness to Diversty instrument by Hobma, Bordia & Gallois (2004)

Op mijn werk:	Helemaal niet mee eens	Niet mee eens	Enigszins niet mee eens	Neutraal	Enigszins mee eens	Mee eens	Helemaal mee eens
Vindt men het leuk om te werken met mensen met een andere etniciteit, van het andere geslacht, en/of van een andere leeftijd							
Doet men extra moeite om te luisteren naar mensen met een andere etniciteit, van het andere geslacht							
Doet men extra moeite om te luistern naar mensen met andere werkwaarden of andere motivaties							
Leert men graag van mensen met andere werkwaarden of andere motivaties							
Vindt men het leuk om te werken met mensen met een andere werkachtergrond of werkervaring							
Doet men extra moeite om te luisteren naar mensen met een andere werkachtergrond of werkervaring							

Appendix C: Dutch versions of the Inclusive culture instrument of Ashikali & Groendeveld and the inclusion instrument of Jansen et al. (2014).

Inclusive culture instrument of Ashikali & Groeneveld (2015).

Op mijn werk:	Helemaal niet mee eens	Niet mee eens	Enigszins niet mee eens	Neutraal	Enigszins mee eens	Mee eens	Helemaal mee eens
Word ik met respect behandeld							
Kan ik openlijk mijn mening geven zonder angst voor negatieve gevolgen							
Worden afwijkende ideeën en meningen gewaardeerd							
Komt discriminatie voor							
Komt intimidatie (angst aanjagen of bedreigen) voor							
Zijn beslissingen van leidinggevende over werknemers eerlijk							

Inclusion instrument of Jansen et al. (2014)

De mensen op mijn werk…	Helemaal niet mee eens	Niet mee eens	Enigszins niet mee eens	Neutraal	Enigszins mee eens	Mee eens	Helemaal mee eens
Geven mij het gevoel erbij te horen							
Geven mij het gevoel onderdeel te zijn van de groep							
Geven mij het gevoel er bij te passen							
Behandelen mij als een insider (iemand die er echt bij hoort)							
Zijn blij met mij							
Vinden mij leuk							
Waarderen mij							
Geven om mij							
Staan me toe om mijn eigen zelf uit te drukken							
Staan me toe om mezelf te laten zien zoals ik ben							
Staan me toe om echt mijzelf te zijn							
Staan me toe om te zijn wie ik ben							
Moedigen mij aan om mijzelf te zijn							
Moedigen mij aan om te zijn wie ik ben							
Moedigen mij aan om mijn eigen zelf uit te drukken							
Moedigen mij aan om mezelf te laten zien zoals ik ben							

Appendix D: Dutch versions of the Job Satisfaction instrument by Mitchell et al. (2001), Job stress instrument by Hadzibajramovic et al. (2015), and Turnover intention instrument by Van Veldhoven & Meijman (1994).

Job Satisfaction instrument by Mitchell, Holtom, Lee, Sablynski, and Erez (2001)

	Helemaal niet mee eens	Niet mee eens	Neutraal	Mee eens	Helemaal mee eens
Al met al ben ik tevreden met mijn werk					
Over het algemeen vind ik mijn werk leuk					
Ik ben erg tevreden met mijn werk					

Job stress instrument by Hadzibajramovic, Ahlborg, Grimby-Ekman, and Lundgren-Nilssonnen, (2015)

Hoe voelt u zich doorgaans aan het einde van een werkdag?	Helemaal niet	Vrijwel niet	Enigszins	Redelijk	Erg	Heel erg
Rustig						
Ontspannen						
Kalm						
Gespannen						
Gestresst						
Alsof ik onder hoge druk sta						

Turnover intention instrument by Van Veldhoven and Meijman (1994)

	Ja	Nee
Ik denk er weleens over om van baan te veranderen		
Ik denk er weleens over om werk buiten deze organisatie te zoeken		
Ik ben van plan om het komend jaar van baan te veranderen		
Ik ben van plan om komend jaar werk buiten deze organisatie te zoeken		

Appendix E: deduction of the percentages in figure 8

Figure 8 (see below) describes the percentages of the likelihood that a certain score corresponds with a certain level of openness to diversity. This section of the appendix will explain how the percentages are deduces from the NPV and PPV of the cutoff points on which the domains are based upon. A score above 66.0 falls in the openness domain, a score between 66.0 and 32.6 falls in the inclusion domain and any score below 32.6 falls in the lack of openness domain. But, as explained previously, any score within a domain does not automatically refer to the specific level of openness to diversity, inclusion or a lack of openness to diversity, due to the NPV and PPV of the cutoff points. A score above 66.0 falls in the openness domain, but the PPV of the cutoff point of 66.0 is 32.83%, so the chance a score above 66.0 confirms openness to diversity is slightly above 30%. To determine the corresponding level of openness to diversity of every score we looked at the NPV and PPV of both cutoff points and combined the information into a framework shown in figure 8.

For the openness domain with a cutoff point at 66.0, the PPV was 32.83% and the NPV was 97.23%. This means that 32.83% of all scores above 66.0 correspond with openness to diversity. The other 67.17% of the scores do not corresponds to openness to diversity, but correspond to inclusion, as we will show later. Since accuracy is important and assume a worst case scenario, it is better to be more conservative and we round the percentages down for openness to diversity. A score above 66.0 corresponds 30% of the time with openness to diversity and 70% of the time with inclusion.

For the lack of openness domain with a cutoff point at 32.6, the PPV was 43.87 % and the NPV was 98.23 %. This means that 43.87 % of all scores below 32.6 correspond with a lack of openness to diversity. The other 56.13 % corresponds to inclusion, as we will show later. Since accuracy is important and assume a worst case scenario, it is better to be more conservative as we round the percentages down for inclusion: as score below 32.6 corresponds 45% of the time with a lack of openness to diversity and 55% of the time with inclusion.

The NPV's of both cutoff points are high: 97.23% and 98.23% respectively. This means that a score between 32.6 and 66.0 is very likely not affiliated with openness to diversity or a lack of openness to diversity. Therefore any score between 32.6 and 66.0 must correspond to inclusion. Since there is a big score separation were both a lack of openness to diversity or openness to diversity does not occur, we can also assume that any score above 66.0 not corresponding to openness to diversity must be corresponding to inclusion and any score below 32.6 not corresponding to a lack of openness to diversity must be corresponding to inclusion.

Taken together, the PPV and NPV of both cutoff points provide us with the chance that a certain score in a domain corresponds with a lack of openness to diversity, inclusion, or openness to diversity, as shown in figure 8.

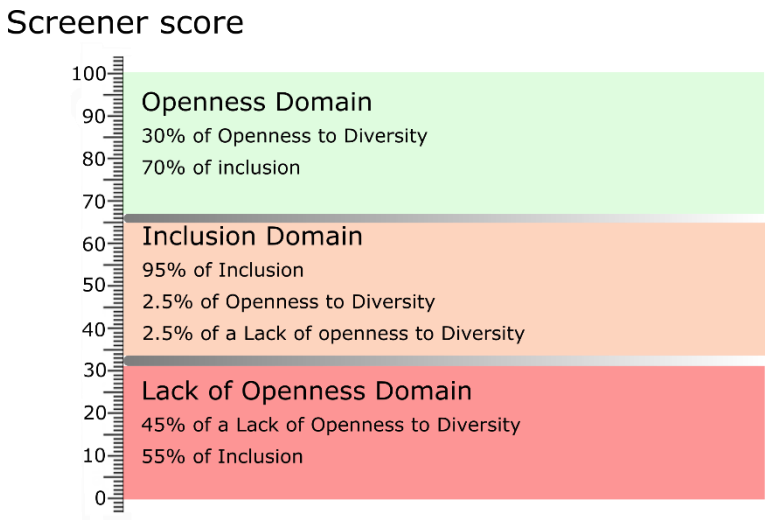

Figure 8: graphical visualisation of the different domains of openness to diversity. If a score is lower than 32.6 there is a chance of 45% there are severe problems within an organisation due to the lack of openness to diversity. If a score is between 32.6 and 66.0, there is a 95 % chance there is only inclusion within the organisation. If the score is higher than 66.0, there is a 30% chance openness to diversity causes an added value to the organisation.