

Chapter 5: As time goes by... Longitudinal study of discrimination and well-being among junior nurses.

Introduction

As we have seen in our previous studies, the relationship between identification with the ingroup, perceived discrimination and well-being is rather complex. One of the problems we face when trying to unravel these links is the issue of causal directionality. Several studies argue that discrimination causes ill-being whereas others pretend that depression or paranoid states lead people to see the world in a darker light and, as a consequence, interpret negative events as deriving from other people's prejudice. Similarly, some researchers argue that high identifiers read the world with group lenses and perceive high levels of intergroup injustice and discrimination. In contrast, their opponents believe that people who undergo severe discrimination end up identifying with their group either because they need to fulfill an urge to belong or because they internalize the categorization that others repeatedly bestow upon them. Sadly, most of these hypotheses and theories are not firmly based on data or, rather, they all are. A lack of longitudinal studies coupled with experimental studies that poorly reflect the reality of the phenomenon make this field a rather tricky one. It is our opinion that longitudinal studies offer the best strategy to get to the bottom of this problem. Because discriminated people have often encountered prejudiced behavior for a long time, the question of what came first can quickly become similar to the famous riddle of the egg and the chicken. We thus believe that these causal issues could be better studied with a group that is just starting to encounter some of the difficulties associated with their membership. For these reasons, we decided to depart from traditional social categories, who are often entangled in discrimination from birth, and to look at a professional group, namely nurses who just started working.

The negative impact of discrimination on well-being.

Even though there is some indication that attributing a failure to other people's prejudice may temporarily protect well-being (Major, Quinton, & Schmader, 2003), most research on perceived personal discrimination underlines a negative link between perceiving discrimination and different measures of well-being (for a review: Schmitt & Branscombe, 2002a). Studies document relationships between discrimination and mental illnesses, depression, anxiety, self-esteem and general life satisfaction (e. a. Klonoff, Landrine, &

Campbell, 2000; Williams, Spencer, & Jackson, 1999). However, the links are usually rather weak, as a stress model would predict (Lazarus & Folkman, 1984). Stressing events, and personal discrimination among them, have no direct impact on well-being. They are buffered (or worsened) by two processes: cognitive appraisals and coping strategies. Through appraisal, the event acquires a meaning and gains a risk-factor as a function of the strategies available to deal with it. The end product is eventually impacting upon well-being. Depending on the resources at hand, people can or can not be affected by it (Lazarus & Folkman, 1984). If most research considers discrimination as the event and well-being as the outcome (Williams et al., 1999), it is not to say that the reverse is never considered. Stress reactions can retroactively impact upon available resources and in turn modify subsequent coping (e. a. Quittner, Glueckhauf, & Jackson, 1990).

Other researchers see well-being as a precursor of discrimination so that some mood states induced by other causes could lead people to perceive more negative events, among which increased discrimination (Sechrist, Swim, & Mark, 2003). Paranoid cognition is also a state of mind that can raise perceptions of injustice towards the self (Kramer, 1998). However, previous longitudinal studies have weakened that argument by showing that discrimination could indeed predict the emergence of new psychiatric troubles (Janssen et al., 2003) but that depression could not predict later perceptions of discrimination (Sellers & Shelton, 2003).

Identification and discrimination; what impacts on what?

Identification and perception of discrimination are not related in a straightforward way. While most researchers believe that identification and discrimination are related (e. a. Branscombe, Schmitt, & Harvey, 1999; Gartska, Schmitt, Branscombe, & Hummert, 2004; Operario & Fiske, 2001; Sellers & Shelton, 2003), some others believe that identification is an independent moderator that reduces (Sellers & Shelton, 2003; Williams et al., 1999) or amplifies (McCoy & Major, 2003) the impact of discrimination on well-being. Often, differences can be found depending on which group is studied and what aspects of identification are used as a proxy for the concept. With transient and experimental groups, discrimination can lead to de-identification. Moreover, identification can also be posited as a moderator of the effect discrimination will have on subsequent identification (Branscombe, Ellemers, Spears and Doosje, 1999).

The sources of identification are studied by developmental psychologists. For them, minority children start questioning and then building their identities when they are confronted with their difference, mostly at the beginning of adolescence (Phinney, 1990). For gender, this

process probably starts even sooner. Indeed, male and female stereotypes and roles are mostly learned around 7 years old (Burn, 1996). This differentiation triggers identity processes and is not especially perceived as unfair or illegitimate. As such, it cannot straightforwardly amount to discrimination. Moreover building an identity does not mean that a high or positive identification will automatically ensue.

An important aspect of identification is that it is not an unitary or well-defined concept. Authors increasingly distinguish between different types of identification. Identification can be seen as the complex ethnic identification described by developmental psychologists, affective identification, self-categorization, prototypicality, or behavioral commitment (Cameron & Lalonde, 2001; Ellemers, Kortekaas, & Ouwerkerk, 1999; Romero & Roberts, 1998; Sellers & Shelton, 2003). For example, Romero and Roberts (1998) showed that when developmental identification and social identity based identification were taken together, only developmental identification was related to perceptions of discrimination. Usually, cognitive identification is positively related to discrimination (Tropp & Wright, 1999 ; Verkuyten & Nekuee, 2001). The type of identification one is dealing with may thus be an important factor to consider when studying its relationship to discrimination, and, as we will see, to well-being.

Identification and well-being.

Finally, well-being is also posited to be related to identification. Studies show this link among several stigmatized groups like deaf people (Bat-Chava, 1994), African Americans (Branscombe, Schmitt, & Harvey, 1999; Crocker, Luhtanen, Blaine, & Broadnax, 1994; Phinney, Cantu, & Kurtz, 1997), Turk and Moroccan teenagers living in the Netherlands (Verkuyten, 1995) or old people (Gartska et al., 2004) among others.

However, this is not true for all types of identification. As it has been defined by developmental psychologists, ethnic identification is not always related to higher levels of well-being (Phinney, 1990). In several studies, only affective identification is related to well-being, whereas cognitive identification is not (Crocker et al., 1994, Postmes & Branscombe, 2002; Verkuyten, 1995; Verkuyten & Lay, 1998) or is even negatively related to it (Verkuyten & Nekuee, 2001). The question of directionality has been less studied in this field.

Linking the three constructs.

Three main positions co-exist in the literature about how discrimination, identification, and well-being are related. First of all, in their Rejection – Identification model, Branscombe,

Schmitt and colleagues (e. a. Branscombe, Schmitt, & Harvey, 1999; Gartska et al., 2004; Jetten, Branscombe, Schmitt & Spears, 2000; Schmitt & Branscombe, 2002a) posit that identification acts as a buffer mediating the relation between perceived personal discrimination and well-being. To the extent that belonging is a fundamental human need (see Baumeister & Leary, 1995) and discrimination amounts to being excluded from the dominant group, people cope with exclusion by identifying with their ingroup, thereby restoring a sense of psychological inclusion (Schmitt & Branscombe, 2002a). In this model, greater levels of perceived discrimination are related to higher identification which is, in turn, related to higher levels of well-being. Through this indirect path, the negative effects of perceived discrimination are reduced and sometimes even erased. The Rejection – Identification model has been replicated on several occasions with different target groups. It stands as the dominant model in contemporary research on these issues. The model is supposed to apply in the case of groups for which discrimination is a prevalent experience (Schmitt & Branscombe, 2002a).

For the supporters of the stress model (Lazarus & Folkman, 1984), identification with the group is one of the resources that people can use to cope with the ordeal of personal discrimination, along with self-esteem, social support or hardiness among others. As such, identification is rather understood as a moderator (Sellers & Shelton, 2003) or even an independent predictor of well-being (Williams et al., 1999). In this view, high identifiers suffer less from discrimination than low identifiers, either because high levels of discrimination are tempered by identification, or because high identifiers generally fare better than low identifiers.

Finally, and in total opposition with the previous hypothesis, McCoy and Major (2003) believe that high identifiers are more at risk from discrimination because these events strike them at the core of their self-definition. In other words, high identifiers, when they encounter discrimination, feel worse than low identifiers.

These competing hypotheses will be investigated in our study.

Next to the relations involving these three constructs, we think that other factors influence the relationship between perceptions of personal discrimination and well-being. Group cognitions like solidarity or entitativity may better encompass the idea of a protective group unit, set for inclusion of the individual. We think that measuring these beliefs may help refine the model. Moreover, the belief that the group is discriminated has been improperly

studied in the past, being often equaled to perception of personal discrimination, although a vast amount of literature calls for their distinction (see Smith & Ortiz, 2002).

The role of perceived solidarity

Perceived social support has often been studied in the context of stress research in relation with diseased or handicapped people but also stress from crowding, natural disasters and the like. More rarely, it has been studied in direct relation with perceptions of personal discrimination. Noh and Kaspar (2003) studied the role of perceived social support as a coping strategy of Asians who were victims of discrimination and found that while passive coping (doing nothing about the event, ruminating) had a negative effect on well-being, this impact was buffered by perceived social support. In the Rejection – Identification model, identification is supposed to be protective of well-being because it is a means to secure inclusion within the ingroup. We believe that perceptions of solidarity may play a similar role, or even account for the effect of identification, in the relationship as it should better encompass the perception of acceptance in the group. We thus added perceived solidarity as a potential moderator or mediator in our study.

The role of entitativity.

Entitativity is defined as the integration of properties making a number of people perceived as a group rather than an aggregate (Campbell, 1958). Entitativity is generally conceptualized along two dimensions. The first one, similarity, is composed of perceptive characteristics like proximity, similarity, and clear boundaries between the group and others. The second dimension, organization, comprises characteristics like common destiny and goals, structure, and organization among group members. Entitativity has been shown to be a desirable feature of the ingroup (Yzerbyt, Castano, Leyens & Paladino, 2000) as it potentially encompasses the fulfilling of numerous needs, such as optimal distinctiveness (Brewer, 1991) and reduction of uncertainty (Abrams & Hogg, 1988). Perceived entitativity is also posited to go hand in hand with greater perceptions of power (Dasgupta, Banaji & Abelson, 1999), better social support (Simon & Pettigrew, 1990) and beliefs in the ability to change the group's fate (Doosje, Ellemers & Spears, 1995). The perception of entitativity is also circularly linked to higher identification, so that high identifiers perceive their group as more entitative (and are motivated to protect that perception) and higher entitativity leads to increased identification (Yzerbyt et al., 2000). As identification acts as a buffer against discrimination, entitativity could have the same effect, as it also stands for a positive inclusion

within the ingroup, and even account for some of identification's protective properties. This is what we mean to investigate in this study.

Group discrimination.

Both the rejection-identification model and the stress model are dealing with perceptions of personal discrimination striking an isolated individual. Numerous theories exist to explain why these episodes of discrimination should have negative implications for the self. The picture is less clear when it comes to the effect of perceived group discrimination. Relative deprivation theorists have examined three decades of work on fraternal deprivation and came to the conclusion that the latter is not related to internal states (Smith & Ortiz, 2002). Studies dealing with the public subscale of collective self-esteem (Luhtanen & Crocker, 1992) also report unstable correlations between public regard (how my group is perceived by others) and personal self-esteem (Rowley, Sellers, Chavous; & Smith, 1998). In our own research, we found that among women and Africans living in Belgium, group discrimination was positively related to well-being (Bourguignon, Seron, Yzerbyt & Herman, in press) (see Chapter 3, experimental section of this thesis).

As for the link with identification, the picture is not simpler. Postmes, Branscombe, Spears and Young(1999) believe that, because identification is a group attitude, it should only be related to group discrimination and not to personal discrimination. However, Operario & Fiske (2001) find no link between ethnic identification and perceived group discrimination. More complex are the results of Cameron and Lalonde (2001) with a group of women. They found that while there was no link between discrimination and identification for traditional women, self-identified feminists showed a positive link between cognitive identification and group discrimination. More puzzling, among non-traditional women who did not identify as feminists, discrimination was positively related to cognitive identification but negatively so to affective identification!

Some researchers believe group discrimination to be a belief rather than a perception referring to actual events (Jost, Burgess & Mosso, 2001; Sidanius & Pratto, 1999). It serves a political agenda and is related to parental beliefs and people's upbringing (Hughes & Demo, 1989). Group discrimination is posited to be related to collective action (Smith & Ortiz, 2002). We believe that this may account for a possible positive connection with well-being.

The present study

In the present study, we examine the longitudinal relationships between our three main variables, namely personal discrimination, identification, and well-being. More precisely, we look at whether identification, well-being and discrimination predict each other over time, and whether moderating or suppressing effects of identification can be observed, depending on the specific facet of identification under scrutiny. We also check whether entitativity, solidarity, and group discrimination have an impact on these relationships. We think that both solidarity and entitativity could be protective of well-being. The role of group discrimination remains open to investigation.

We decided to study a professional group in order to test people at the very beginning of their stigmatized life. We decided to work with nurses because it is a profession that has a long history of being overlooked and being considered as the “little hands” of great and intelligent doctors. Interviews with ten senior nurses were conducted prior to this study in order to check for the application of the term “discrimination” to their specific conditions. Results of these interviews will not be described here but comforted us in our choice of this specific target group. We also settled for nurses who were just starting to work¹³⁷ in order to look at the relationships between our variables as they first unravel.

Method

Participants.

We contacted 941 nurses who had just finished their training. We did so via the mail¹³⁸. The initial sample comprised 778 females (83%) and 132 males (14%). Names could not inform us of the gender of the remaining 31 people (3%). Also, 730 respondents were living in Belgium, 202 were living in France and 9 in other countries (Luxembourg, the Netherlands, Canada). The respondents were coming from 12 different Belgian nursing schools.

400 of them answered the first questionnaire of the study. Of those 400, 264 answered the second phase. Finally, 194 of them sent back the third questionnaire and thus completed the whole study.

¹³⁷ We also kept in the sample several students who started a specialization because this type of course encompasses a lot of field practice. We computed our analyses with and without them and results were not altered.

¹³⁸ We obtained their names and addresses through letter and phone contacts with nursing high schools in Wallonia and Brussels. All were French-speaking.

We collected data a first time in September 2002, then four months later, then again four months later. However, people greatly varied in their diligence to send the questionnaire back, so the spacing between two questionnaires varies quite a lot between participants. Analyses will be performed on the 194 participants who answered the last questionnaire. These represented 21% of the original sample, 48,5 % of the first respondents, and 73% of the second phase respondents. 165 of our final respondents were females (85,5 %) and 28 of them males (14,5 %). One gender was missing¹³⁹. 62,5% of these nurses were working in hospitals, 4% in nursing homes and 1,5% at home. The remaining 32% were still students who had undertaken a specialization. Participants had worked for an average of 8,4 months and their mean age was 22,6 years old.

Material.

The four page questionnaire comprised several scales. With the exception of a few open-format questions placed at the end of the questionnaire, all answers had to be given by reporting personal agreement with the items on 7-point scales ranging from 1 (=I don't agree at all with the statement) to 7 (=I totally agree with the statement). All the specific sub-scales were based on the analyses of the first study with this sample (see previous chapter).

We measured two types of **discrimination**: *general group discrimination* (4 items, items: "Prejudice and discrimination against nurses really exist", "Nurses suffer as a group because of their profession", "I am regularly confronted with prejudice against my professional group" and "Nurses as a group are regularly confronted with devaluation") (α phase 1 = .79, α phase 2 = .82, α phase 3 = .83) and *personal discrimination* (2 items: "I have personally been victim of discrimination because of my profession", "I have personally been victim of devaluation because of my profession") (α phase 1 = .82, α phase 2 = .89, α phase 3 = .86)

Nine items assessed **social identification**. Six items composed the index of *affective identification*, e. a. "I feel good about being a nurse" or "I feel nurses can be satisfied of who they are" (α phase 1 = .80, α phase 2 = .81, α phase 3 = .81). The last three items formed a *self-definition measure of identification*: e.a "The fact that I am a nurse is an important

¹³⁹ Since gender was only asked in the first questionnaire, we never managed to fill in that information.

reflection of what I am” or “To describe myself, I would certainly refer to the fact that I am a nurse” (α phase 1 = .74, α phase 2 = .80, α phase 3 = .83).

Ten items measured **trait self-esteem** (Rosenberg’s scale) (α phase 1 = .85; α phase 2 = .89; α phase 3 = .89).

Six items measured **life satisfaction**. E. a. “In general, I am satisfied of my life as it is today” (α phase 1 = .82; α phase 2 = .84; α phase 3 = .85).

Six items measured **ingroup solidarity**. E. a. “Nurses can count on each other” or “I have the feeling that among nurses, we understand each other” (α phase 1 = .95; α phase 2 = .96; α phase 3 = .95).

Finally, nine items measured **entitativity**, e. a. “Nurses share a common nature”, “Nurses live similar experiences in the course of their career.” (phase 1 α = .74, phase 2 α = .81, phase 3 α = .79).

In the first questionnaire, people had to write down their gender, age and the length of time they had worked so far. In the second questionnaire, people were asked their actual occupation and once again the length of time they had worked so far (in order to assess if people had been unemployed and as such, had a shorter experience than others). In the third questionnaire, people were again asked about their work experience as well as if they had participated in any collective actions and, if they had, to describe them¹⁴⁰.

¹⁴⁰ However, these results will not be described here.

Results

Table 1 contains the means and standard deviations of all our variables at time 1, 2 and 3.

Table 1. Means and standard deviations of our variables.

	Time 1	Time 2	Time 3
Group discrimination	3.89 (1.43)	4.03 (1.42)	3.82 (1.40)
Personal discrimination	2.35 (1.84)	2.52 (1.85)	2.52 (1.75)
Affective identification	6.03 (0.91)	5.98 (0.90)	5.87 (0.91)
Self-definition	5.14 (1.35)	5.09 (1.40)	5.03 (1.50)
Solidarity	5.05 (1.41)	4.96 (1.40)	4.96 (1.31)
Entitativity	4.37 (0.89)	4.40 (0.94)	4.31 (0.93)
Self-Esteem	5.62 (0.98)	5.70 (0.92)	5.60 (0.97)
Life satisfaction	5.61 (1.08)	5.46 (1.07)	5.41 (1.09)

Evolution of our dependent variables over time.

We computed several repeated measures analyses of variance on our variables in order to see if they evolved over time.

Life satisfaction changed over time, $F(2, 384) = 3.83, p < .03$. Satisfaction at time 1 ($M = 5.61$) was significantly higher than satisfaction at time 2 ($M = 5.46, t(194) = 2.01, p < .05$) and 3 ($M = 5.41, t(194) = 2.71, p < .01$). Those last two measures did not differ.

Affective identification varied as well, $F(2, 386) = 5.09, p < .007$. Affective identification indexes at time 1 ($M = 6.03$) and 2 ($M = 5.98$) were higher than affective identification at time 3 ($M = 5.87, t(194) = 2.93, p < .004$ and $t(194) = 2.47, p < .02$, respectively).

Group discrimination changed marginally over time, $F(2, 386) = 2.67, p < .08$. Group discrimination at time 2 ($M = 4.03$) differed from group discrimination at time 3 ($M = 3.82, t(194) = 2.49, p < .02$). Both were equal to group discrimination at time 1 ($M = 3.89$), though.

All other variables remained stable over the 8-month period that our data collection lasted.

As life satisfaction and self esteem were highly correlated (r between .45 and .60 depending on the time of data collection) we collapsed them into a single index of well-being for the remaining analyses. Pearson correlations coefficients for variables between time 1 and 2 are presented in Table 2.

Table 2. Intercorrelations (Pearson's r) between our variables.

	1	2	3	4	5	6	7	8	9	10
1.WB1	/	/	/							
2. PD1	-.16*	/	/							
3. SD1	.19*	.11	/							
4. AF1	.43***	-.21*	.40***	/						
5. GD1	-.25***	.53***	.02	-.34***	/					
6.EN1	.23*	.10	.45***	.35***	-.00	/				
7. SO1	.41***	.00	.32***	.46***	-.11	.44***	/			
8.WB2	.60***	-.03	.11	.32***	-.21*	.18*	.26**	/		
9 PD2	-.28***	.45***	.13†	-.16*	.30***	.03	-.16*	-.19*	/	
10.SD2	.07	.11	.69***	.31***	.04	.27**	.24**	.16*	.11	/
11AF2	.39***	.04	.39***	.64***	-.19*	.35***	.48***	.54***	-.10	.50***

WB: well-being, PD: personal discrimination, SD: Self Definition AF: Affective Identification, GD: group discrimination, EN: entitativity, SO: solidarity

Note: †: $p < .1$ *: $p < .05$ **: $p < .01$ ***: $p < .001$

We then computed a series of linear regressions in order to highlight the longitudinal relationships between our main variables. We controlled for age, gender, and length of work in all our analyses.

Prediction of well-being

We performed a stepwise regression to investigate the relationships between well-being at time 2 and perceived personal discrimination and group cognitions (identification, entitativity, solidarity and group discrimination) at time 1 (see Table 3). In a first step, we entered well-being at time 1 (as a control variable) as well as personal discrimination at time 1. The analysis was significant, $F(5,191) = 19.71$, $p < .0001$, $adj. R^2 = .33$). Well-being at time 2 was highly related to well-being at time 1 ($\beta = .60$, $p < .001$) but unrelated to personal

discrimination. At step 2, we added both indexes of identification, but there was no increase in explained variance as neither self definition nor affective identification impacted on well-being, $F(7,191) = 14.50$, $p < .0001$, $adj. R^2 = .33$. At step 3, the addition of the three group cognitions did not explain a significant increase in the variance of well-being at time 2 $F(10, 191) = 10.51$, $p < .0001$, $adj. R^2 = .33$. However, perceptions of group discrimination reached a marginal level of significance as a predictor ($\beta = -.13$, $p < .1$), indicating that high levels of perceived group discrimination at time 1 tended to be associated with worse well-being at time 2. In a fourth step, we added interaction effects between personal discrimination and identification, entitativity, solidarity and group discrimination, in order to see if one of those group cognitions had moderating effects. However none came out significant, $F(15,191) = 7.58$, $p < .0001$, $adj. R^2 = .34$).

Table 3. Stepwise regression of identification, group cognitions and discrimination at time 1 predicting well-being at Time 2.

	Step 1	Step 2	Step 3	Step 4
Well-being T1	.60***	.56***	.55***	.53***
Personal Disc. T1	.07	.09	.15*	.10
Aff Id T1		.12	.09	.10
Self Def T1		-.06	-.06	-.07
Group Dis T1			-.13†	-.11
Solid T1			-.03	-.02
Entit T1			.04	.02
SD * PD				.10
AF * PD				-.02
ENT * PD				.11
GD * PD				.01
SO * PD				-.04
F	19.71	14.50	10.51	7.58
R2	.33***	.33***	.33***	.34***
R2 change		.00 ns	.00 ns	.01 ns

WB: well-being, PD: personal discrimination, SD: Self Definition AF: Affective Identification, GD: group discrimination, ENT: entitativity, SO: solidarity

Note: †: $p < .1$ *: $p < .05$ **: $p < .01$ ***: $p < .001$

We replicated the same analysis for relationships between time 2 and 3. As can be seen in Table 4, results are similar to the previous regression, with well-being being solely predicted by itself and a marginal impact of group discrimination.

Table 4. Stepwise regression of identification, group cognitions and discrimination at time 2 predicting well-being at Time 3.

	Step 1	Step 2	Step 3	Step 4
Well-Being t2	.56***	.56***	.56***	.58***
Personal Disc T2	-.06	-.06	.01	-.04
Aff Id tps2		-.02	.00	.01
SD tps2		.01	.02	
Group Disc T2			-.14†	-.11
Solid T2			-.10	-.08
Entit T2			.03	.02
sd * pd				-.07
aff*pd				.09
so*pd				.06
ent*dp				.01
dg*dp				.09
F	18.38	13.00	9.59	6.67
R2	.31***	.31***	.31***	.31***
R2 change		.00 ns	.00 ns	.00 ns

WB: well-being, PD: personal discrimination, SD: Self Definition AF: Affective Identification, GD: group discrimination, EN: entitativity, SO: solidarity

Note: †: $p < .1$ *: $p < .05$ **: $p < .01$ ***: $p < .001$

Prediction of identification facets

Self Definition

We computed a stepwise regression analysis to see if discrimination and well-being at time 1 could predict the self definition aspect of identification at time 2 (Table 5). In a first step, we entered self definition and affective identification. The overall model was significant, $F(5, 192) = 35.19$, $p < .0001$, $adj. R^2 = .47$). Self definition at time 1 was related to self definition at time 2 ($\beta = .68$, $p < .0001$). In a second step, we added perceived personal and group discrimination as well as well-being measured at time 1. However, those variables

failed to improve the model, $F(8, 192) = 22.44$, $p < .0001$, $adj. R^2 = .47$, and none of them was significant. We replicated this regression analysis between time 2 and 3 and found the same pattern of results (see Table 6).

Table 5. Prediction of Self definition at time 2

	Step 1	Step 2
SD t1	.68***	.66***
Aff Id t1	.04	.10
Personal Disc t1		.04
Group Disc t1		.02
WB t1		-.09
F	35.19	22.44
R2	.47***	.47***
R2 change		.00 ns

Note: †: $p < .1$ *: $p < .05$ **: $p < .01$ ***: $p < .001$

Table 6. Prediction of self definition at time 3

	Step 1	Step 2
SD t2	.74***	.73***
Aff Id t2	.02	.04
Pers Disc t2		.09
Group Disc t2		-.06
WE t2		-.06
F	48.33	30.42
R2	.55***	.55***
R2 change		.00 ns

Note: †: $p < .1$ *: $p < .05$ **: $p < .01$ ***: $p < .001$

Affective identification

We performed another regression analysis for affective identification (Table 7). In a first step, we entered both facets of identification. This yielded a significant model, $F(5,192) = 29.14$, $p < .0001$, $adj. R^2 = .42$. If affective identification at time 2 was mainly related to

affective identification at time 1 ($\beta = .57, p < .0001$), self-definition at time 1 also predicted affective identification ($\beta = .15, p < .05$). At step 2, we added both indexes of perceived discrimination and well-being measured at time 1. This increased the portion of explained variance, $F(8,192) = 21.06, p < .0001, adj. R^2 = .46, R^2 change = .04$). Personal discrimination appeared to predict affective identification ($\beta = .20, p < .001$) as did well-being ($\beta = .13, p < .01$).

Table 7. Prediction of affective identification at time 2.

	Step 1	Step 2
Aff Id t1	.57***	.55***
SD t1	.15*	.12†
Pers Disc. T1		.20**
Group Disc t1		-.07
WB t1		.13*
F	29.14	21.06
R2	.42***	.46***
R2 change		.04**

Note: †: $p < .1$ *: $p < .05$ **: $p < .01$ ***: $p < .001$

We replicated this analysis for time 2 and 3. As can be seen in Table 8, personal discrimination and well-being at time 2 were unrelated to affective identification at time 3.

Table 8. Prediction of affective identification at time 3.

	Step 1	Step 2
Aff Id t2	.73***	.76***
SD t2	.06	.07
Pers. Disc t2		-.04
WB t2		-.09
Group Disc t2		-.05
F	48.87	30.65
R2	.55***	.55***
R2 change		.00 ns

Note: †: $p < .1$ *: $p < .05$ **: $p < .01$ ***: $p < .001$

Prediction of Personal Discrimination

Finally we computed a stepwise regression to see if well-being and identification facets at time 1 could predict perceptions of personal discrimination at time 2 (table 9). In a first step, we entered personal and group discrimination indexes at time 1. This yielded a significant model, $F(5,192) = 10.27$, $p < .0001$, $adj. R^2 = .19$. However, only personal discrimination at time 1 is related to personal discrimination at time 2. In the second step, we added identification facets as well as well-being measured at time 1. The explained variance was significantly increased, $F(8, 192) = 8.58$, $p < .0001$, $adj. R^2 = .24$, R^2 change = .05. Self-definition at time 1 was marginally related with perceptions of discrimination at time 2 ($\beta = .14$, $p < .1$). Well-being, on the other hand, was negatively related with perceptions of discrimination ($\beta = -.23$, $p < .01$).

Table 9. Prediction of personal discrimination at time 2.

	Step 1	Step 2
Pers. Disc t1	.41***	.38***
Group Disc t1	.08	.02
Aff Id t1		-.02
SD t1		.14†
WB t1		-.23**
F	10.27	8.58
R2	.19***	.24***
R2 change		.05**

Note: †: $p < .1$ *: $p < .05$ **: $p < .01$ ***: $p < .001$

We replicated this analysis for the prediction of perceived discrimination at time 3 (table 10). The results were quite different. At step 1, group discrimination appeared as a significant predictor of personal discrimination, whereas at step 2, self-definition retained its marginal link. Well-being was no longer a predictor of perceived personal discrimination.

Table 10. Prediction of personal discrimination at time 3.

	Step 1	Step 2
Pers Disc t2	.43***	.43***
Group Disc t2	.18*	.16*
Aff Id t2		-.13
SD t2		.12†
WB t2		.02
F	18.13	11.75
R2	.31***	.31***
R2 change		.00 ns

Note: †: $p < .1$ *: $p < .05$ **: $p < .01$ ***: $p < .001$

Discussion

Even though a cross-sectional look at the relationships between our main variables reveals numerous links between them (see previous chapter and Table 2), finding stable impacts over time has proven tricky and our data does not allow us to make clear-cut conclusions. Some of the relationships we observed between phase 1 and phase 2 of data collection are not replicated as we go from phase 2 to phase 3. To the extent that we wanted to poll the “genesis” of discrimination, this can be a positive point: some relationships might evolve over time (Lepore, Evans & Schneider, 1991). However, making sense of those relations has proved elusive. We believe that one of the reasons for the disappearance of some links between phases may be the repetition of the same questionnaire over and over. Even if our 194 participants were motivated enough to fill in the questionnaire and send it back three times, learning or fatigue effects may have taken place. It might thus be possible that only the results obtained for time 1 and 2 are really meaningful.

We were not able to show an impact of perceived personal discrimination on well-being over time. Prior identification also appeared unrelated to well-being four months later, and neither entitativity nor solidarity proved to be protective of well-being when considered as moderators of personal discrimination or independent predictors. Only perceptions of group discrimination appeared to have a marginal impact on well-being, but in the negative direction. The fact that group discrimination rather than personal discrimination seems to be predictive of well-being goes against most data (Smith & Ortiz, 2002). However, as our

nurses were just starting to work, it seems possible that group perceptions might act as an omen of future conditions, and as such, amount to some pessimism. On the contrary, personal discrimination, with its low levels, might be easily discarded as it has just started to appear and people might then resemble dominant group members in that prevalence has not begun to hamper life (Schmitt & Branscombe, 2002a). In previous studies (Bourguignon, Seron, Yzerbyt, & Herman, *in press*, see previous chapter), we had already underlined the predictive power of group discrimination, albeit in the reverse direction. We believe that our nurses having chosen a profession and just starting it might display rather different patterns than traditional stigmatized groups, since they are responsible for having chosen their relatively low status.

Whereas self definition could not be predicted by prior perceptions of discrimination or higher levels of well-being, affective identification was related both to personal discrimination and well-being. Perceived personal discrimination leads to higher levels of affective identification and people feeling better at time 1 also report higher levels of affective identification at time 2. The positive relationship between personal discrimination and affective identification seems to confirm the Rejection – Identification model, which posits that personal discrimination should increase identification through the need to belong that rejection impairs. Sadly, neither well-being nor affective identification retained their predictive power at time 2.

Finally, perception of personal discrimination was also predicted by identification and well-being. Well-being at time 1 predicted personal discrimination at time 2, indicating that a worse outlook on life did indeed predict perceptions of discrimination later on (Kramer, 1998). However, the relationship disappeared over time. It might be that during the first months, general well-being impacts upon perceptions of discrimination then stops to do so because other processes take over. It might also reflect the intricate and circular relationships that link those different factors, as our other results underline further.

More stable but less significant, self-definition marginally predicted more perceptions of personal discrimination four months later (between time 1 and 2, as well as 2 and 3), supporting the idea that high identifiers read the world in a specific manner (or provoke more events!) (Postmes et al., 1999; Sellers & Shelton, 2003).

These results seem to indicate that identification and discrimination are related in both directions, which should reconcile tenants of both points of view. However, it is not the same facets of identification that predict and are predicted by personal discrimination. Whereas self definition, a cognitive aspect of identification, appears to increase perceptions of discrimination, perceptions of discrimination have an impact on subsequent affective identification. The fact that cognitive identification increases perceptions of discrimination has also been supported by Sellers and Shelton (2003).

Well-being is often considered to be the consequence when one studies discrimination. Our results show that far from being a distant result of the interplay between discrimination and identification, well-being predicted both! This is not surprising in the context of a stress model where a retroactive loop goes from the psychological outcomes of a stressing situation to the subsequent appraisal and coping mechanisms. Moreover, all in all, the general regression of well-being indicated that well-being was the trickiest variable to predict and that is mainly related to previous well-being. Only group discrimination seemed to be slightly predictive of worse adjustment.

Finally, our sample also showed stable indices over time, as if their first months of work did not constitute a real change: only life satisfaction and affective identification decreased, indicating that time had a slightly negative effect. Group discrimination varied, but not in linear fashion. As nursing studies encompass numerous training periods in hospital settings, it might be possible that nurses' awakening to discrimination takes place during their first years of study rather than during their first years of work. However, the disappearance of several links indicates that something might happen between time 2 and 3.

Conclusion

To summarize, it is fair to say that our results fail to settle the problem of directionality in the triangle composed of identification, discrimination, and well-being. It may be that, like the riddle of the chicken and the egg, there is simply no clear or satisfying answer. As other researchers have stressed before, reciprocal relationships are at work here (Sellers & Shelton, 2003). A better way to understand how discrimination, identification, and well-being relationships unfold may be to concentrate more finely on individuals as they meet their first episodes of discrimination: freshly arrived immigrants or people who suddenly join a discriminated group (homosexuals discovering their orientation, people becoming unemployed,...). It is however likely that for each specific group, different conditions will

foster different strategies and relationships, depending on whether a community is available, whether they take responsibility for their situation, and many other factors.

It is also important to consider changes in patterns over time. Noh and Kaspar (2003) showed for example that coping strategies to deal with discrimination were differently related to well-being among just arrived Korean immigrants in Canada and the same group two years later. This reminds us that there is probably no definite answer to the question of the links between identification, discrimination and well-being. We can safely say that they are related and that their relationship is complex. Discrimination is not a positive experience and identification is far from being an incredible panacea. All in all, well-being itself is not so strongly related to them, at least among young nurses.

Finally, our data underlines the importance of two distinctions that are too often overlooked in the current literature on discrimination. First of all, group discrimination and personal discrimination are two different things and have separate effects on well-being and identification. They should not be taken together as a single construct, but considered separately. Secondly, identification is not an unitary concept. Its different facets have sometimes opposite effects and taking them together amounts to obscuring the complexity of people's attitudes towards their ingroup, and the impact of this complexity on subsequent variables. Even if we believe that part (or even most) of our results are highly specific to the group under study, we think that those two distinctions should be universally implemented when discrimination and/or identification are under scrutiny.