ISCTE IUL
Instituto Universitário de Lisboa

IUL School of Social Sciences

Department of Social and Organizational Psychology

Stronger than Atoms: Implicit and Explicit Attitudes towards Persons with Impairments and Disabilities in a Group of Professionals in the Rehabilitation Area

Dissertation submitted as partial requirement for the conferral of
Master in Social Psychology of Health

by

Ana Sofia Anselmo dos Santos Gonçalves de Oliveira

Supervisor:
PhD., Sibila Fernandes Magalhães Marques, Assistant Professor
ISCTE – Instituto Universitário de Lisboa

Co-supervisor:
PhD., Ricardo Filipe Pinto Borges Rodrigues, Invited Assistant Professor
ISCTE – Instituto Universitário de Lisboa

February, 2017

Dedication

Dedicated to

My two beautiful children, Clara and Gabriel, who fill my days with lifeful joy.

And to my grandfather and uncles, Salvador, Vítor and António, whose cherished memories keep them alive in me.

Thank you for the blessing of being part of my life.

Aknowledgements

It seems that I have finally accomplished one important mark in my personal, professional and academic paths! There were times when I seriously doubted I would be capable of arriving at this point, as I have dealt with some great challenges of all sorts through this journey… But here I am after all!

I cannot forget, however, I have not travelled this road alone, and several invaluable persons and organisations have had a very crucial role in helping me through it all.

Professors Sibila and Ricardo, thank you very much for sharing your knowledge and insights, for believing in me and my work, for your comments, reviews, and for all the patience, care and support whether in brighter days, whether in those marked by submersions in self-doubt and distress (they were a few).

Professor Luísa Lima, thank you for all your precious comments on my work, and for doing all in your power as course director to ease my journey when conflicting activities within roles arose here and there along the way.

I must also thank my family, especially my life partner Ricardo, for all the unconditional logistical and emotional support, for undertaking quite an extra burden for me to get to this finish line; I am glad for having your loving presence beside me, as well as our two beautiful children brightening up our life.

Thank you, mum and dad, for all the support throughout my life, the babysitting and … for always being there for me; you are invaluable as you ever were and will be. Thank you also, mum, for reviewing the English in all the pages in this work, as well as the translations of the instruments used.

I am also grateful for my sister's Inês back up in helping me with the preparation of the pictorial stimuli used in the adapted Implicit Association Test, as well as for babysitting or just by hearing me out and saying silly things to cheer me up when days were greyer.

I would also like to address a special thank you to Professor Anabela Martins from Escola Superior de Tecnologia da Saúde de Coimbra for so kindly sharing her work on the Portuguese adaptation of the Attitudes Towards Disabled Persons Scale – Form O, while also offering further personal help if needed, and to Professors Geri E. Solomon and Deborah V. Dolan, Ms. Debra A. Willett and Ms. Ruth Mangels from Hofstra University, Hempstead, New York, for all the help in getting fundamental references, especially those (co-)authored by Dr. Harold Yuker.

I am equally thankful to the organisation where data was collected, and I am indebtedly grateful to all the professionals who so willingly shared some of their time and interest to help me accomplish the present work.

Thank you all for your generosity.

Resumo

Após várias décadas de investigação de atitudes fazendo sobretudo uso de métodos de auto-relato, que revelaram atitudes explícitas mais positivas ao longo do tempo, pesquisas mais recentes no domínio da cognição social implícita, revelaram consistentemente a existência de atitudes implícitas negativas em relação a pessoas com deficiência e incapacidade, mesmo entre profissionais que trabalham frequentemente com esta população, emprestando assim compreensibilidade aos indicadores de exclusão social que, no entanto, continuaram acumular-se ao longo do tempo.

Essa inconsistência entre medidas explícitas e implícitas tem sido comummente interpretada como sendo o resultado de processos duais de atitudes, compreendendo atitudes ambivalentes em relação às pessoas com deficiência, ao mesmo tempo em que sugerem a manifestação de "*disablismo* aversivo".

A literatura mostra que o contato direto com pessoas com deficiência é o correlato mais importante das atitudes explícitas, contribuindo para a sua melhoria, especialmente sob as condições ótimas definidas por Allport; entretanto, nem sempre este efeito se verifica. Além disso, o contato direto com pessoas com deficiência não tem sido consistentemente avaliado teórica e metodologicamente, especialmente no que se refere às atitudes implícitas, o que constitui uma importante limitação.

Foi realizado um estudo correlacional com o objetivo de explorar as atitudes explícitas e implícitas de um grupo de profissionais que trabalham diariamente com pessoas com deficiência em relação a este grupo, bem como a relação entre estas atitudes e o contato direto, incluindo indicadores de contato geral, bem como de quantidade e qualidade do contato com essa população.

Os resultados revelam que os profissionais da amostra detêm atitudes implícitas negativas em relação a pessoas com deficiências e incapacidades, enquanto as suas atitudes explícitas são positivas, as quais se encontram muito pouco correlacionadas, como é frequentemente observado na literatura. As respetivas hipóteses foram por isso suportadas. No entanto, as relações entre as medidas de atitudes e o contato não são apoiadas pela análise dos dados; especificamente, o contato está apenas fraca e não significativamente associado com atitudes explícitas ou implícitas, colidindo assim com o grande corpus da literatura que aponta para a importância do contato intergrupal na redução do preconceito explícito.

Os resultados são discutidos de acordo com enquadramento teórico, incluindo ainda as limitações do estudo, direções futuras e as suas implicações práticas.

Palavras-chave: deficiência, Teste de Associações Implícitas, atitudes, contacto intergrupal.

Códigos de Classificação (American Psychological Association): **3020** Processos Interpessoais e de Grupo, **3040** Percepção Social e Cognição, e **3380** Reabilitação.

Abstract

After several decades of attitude investigation using self-report methods, pointing to more positive explicit attitudes throughout time, more recent research in the implicit social cognition domain, consistently revealed negative implicit attitudes regarding people with disabilities, even among professionals working frequently with this population, and hence lending comprehensibility to the indicators of social exclusion that, nevertheless, kept piling up.

This explicit-implicit inconsistency has been commonly interpreted both as resulting from dual processes of attitudes, and as encompassing ambivalent attitudes towards people with disabilities, while also suggesting a manifestation of “aversive disablism”.

Research shows that direct contact with people with disabilities is the most important correlate of explicit attitudes, contributing to its enhancement, especially under the optimal conditions defined by Allport; however, this is not always the case. Furthermore, direct contact with people with disabilities has not been consistently evaluated both theoretically and methodologically, especially concerning implicit attitudes, which constitutes an important literature caveat.

A correlational field study was conducted to explore the explicit and implicit attitudes of a group of professionals working daily with people with disabilities towards this group, as well as the relationship between these attitudes and direct contact, including general contact as well as perceived amount and quality of contact with this population.

Results revealed negative implicit and positive explicit attitudes, which were also very weakly correlated; the respective hypothesis were thus confirmed.

The predicted relationships between these attitude measures and contact variables were not supported: contact was only weakly and not significantly associated with either attitude measures.

The results are discussed within the theoretical framework reviewed, including the limitations, future directions and practical implications.

Keywords: disability, Implicit Association Test, attitudes, intergroup contact.

Classification Codes (American Psychological Association): **3020** Group & Interpersonal Processes, **3040** Social Perception & Cognition, **3380** Rehabilitation.

Contents

Table Index

Glossary

ATDP – O – Attitudes Towards Disabled Persons Scale – Form - O

CDP – Contact with Disabled Persons Scale

CES – Centro de Estudos Sociais

CLT – Central Limit Theorem

CRPG – Centro de Reabilitação Profissional de Gaia

DA-IAT – Disability Attitude Implicit Association Test

DGS – Direção-Geral da Saúde

DRPI – Disability Rights Promotion International – Portugal

EDF – European Disability Forum

EFC – European Foundation Centre

EQLS – European Quality of Life Survey

FRA – European Union Agency for Fundamental Rights

IAT – Implicit Association Test

ICF – International Classification of Functioning, Disability and Health

ICIDH - International Classification of Impairments, Disabilities, and Handicaps

INE – Instituto Nacional de Estatística

ISCTE – Instituto Superior de Ciências do Trabalho e da Empresa

NDA - National Disability Authority

OMS – Organização Mundial de Saúde [World Health Organization]

PI – Project Implicit

P**W**ID – Persons **With** Impairments and Disabilities

PwID – Persons without Impairments and Disabilities

SNR – Secretariado Nacional para a Reabilitação

WB – World Bank

WHO – World Health Organization

Introduction

"You go back and forth and have no idea how awful it feels to be absolutely nobody. All day long I sit at the window and see people go back and forth, fast or slow, talking to this person or that person, enjoying life, and I'm like a flowerpot with a withered plant, forgotten in the window, waiting to be taken away."

Maria José (Fernando Pessoa's Heteronym; 2001)

Disability… It has been part of my "experience of existence" since as long as I can remember… in different contexts: in my own family, with neighbours, and, more recently, as a professional.

The earliest memories I recall go back to my childhood, and are inhabited by Luís, a late teenager back then. Luís has Down Syndrome. His parents have a "very convenient store" which I frequently visited along with my mother and grandmother; it was not rare to find him there waiting for the bus that would take him to the institution where he spent his day (and still does actually, now that he is in his mid-forties), to which everyone referred to as "school", including him... and then a big bus would arrive, filled with other "different" and "special" "boys" and "girls" (and that was really puzzling for my childlike reasoning), to take him there… I vividly recall experiencing a very uncomfortable anxiety regarding Luís, especially because he was always so effusive in demonstrating affection through breath-taking hugs that would inevitably leave me somewhat sore. Building on this, my child version of me felt confused by him: he looked, talked and, generally put, behaved "funny" (or unlike any other person I had ever met in my short life); the only explanations I remember ever receiving from adults regarding my "why" and "how" questions about Luís were something like "Well honey, he is just a different boy.", or the equally-lacking-in-information-alternative "Luís is just a special person.".

From these first experiences on, life has been delivering several opportunities to further think, explore and elaborate on, and beyond, them. More recently, alongside with my work with people with disabilities, both as colleagues and targets of intervention, I have been mainly concerned with behaviours towards this fringe of the population, especially those denoting prejudice, whether blatant or surreptitious, with a potentially detrimental impact on their lives. From the more tender and sweet, yet paternalistic and infantilizing, designation of a group of adults with multidisabilities as "kids", to the striking and serious doubts of a doctor regarding the need for an 18-year-old multidisabled young woman to get a gynaecology consultation. I started asking myself then: What impact can we expect these attitudes and behaviours to have on people with disabilities' lives? These episodes hence triggered the ambition to pursue other questions as well as the present dissertation.

Furthermore, evidently beyond my obvious personal interest, the study of attitudes towards persons with disabilities is justified by expressive data regarding worldwide demographic statistics and many standard of living correlates, as well as research concerning numerous psychosocial variables related to disability, detrimentally impacting on these persons' health and, ultimately, quality of life.

Despite the civilizational advances on the inclusion of the population with disabilities, it is still bluntly glary, even to the naked eye, that these persons do not participate fully in society. It is quite difficult to eradicate the negative attitudes associated with this minority group, especially because they can be activated outside of awareness, with a limited degree of controllability, and hence expressed in a subtle way. The negative impact of these so-called “implicit attitudes”, is not lower, however, when compared to those more explicitly expressed - and apparently less frequently – and may lead to profoundly adverse consequences at various levels, such as health and quality of life (e.g. Emerson, Madden, Graham, Llewellyn, Hatton, & Robertson, 2011; Yuker, 1988, 1994), preventing the full and effective participation of these persons in the society.

Negative explicit and implicit societal attitudes towards people with disabilities have been empirically sustained through the last decades and are now very well documented in the literature. Even professionals who work with this group, as well as students from several academic domains who predictably will engage in frequent direct contact with this population, express negative implicit and/or explicit attitudes towards people with disabilities, with potentially serious consequences in what concerns intervention (e.g. Chubon, 1982; Gething, LaCour, & Wheeler, 1994; Pruett, & Chan, 2006; Robey, Beckley, & Kirschner, 2006; Wilson & Scior, 2014). Nevertheless, it has not been observed a consistent pattern: in some studies, their level of negative bias did not differ significantly from that of the general population (French, 1996; Cook, 1998; cited by Chan, Livneh, Pruett, Wang, & Zheng, 2009), or from other professionals or students from domains with (expected) less frequent contact with people with disabilities negative attitudes (e.g. Lyons, 1991). In contrast, other authors found the reverse situation, with those students or professionals working directly with this minority group exhibiting more positive explicit and/or implicit attitudes than students or professionals from other academic backgrounds (e.g. Chan, Lee, Yuen, & Chan, 2002), or those from the general population (French, 1996).

Since the beginning of attitude research in the broad field of Social Psychology, that the so-called direct, or self-report, methods such as opinion surveys, rating scales, or interviews have been traditionally used, including the literature *corpus* dedicated to the attitudes towards persons with disabilities. As such, the contradictory observations cited above, may be justified, at least partially, by the extensive use of these instruments, which are more sensitive to respondent reactivity (e.g. Antonak & Livneh, 2000; Wilson & Scior, 2014), and the possibility of strategic response, especially when the attitudinal object is sensitive, and the expression of blatant, explicit negative attitudes in relation to it is socially sanctioned – as it is the case of people with disabilities (e.g. Chan et al., 2009; Dovidio, Pagotto & Hebl, 2011), thus calling into question their validity. Hence, the apparent decline in overt expressions of prejudice against several stigmatized groups, thus suggesting improvement in attitudes towards disability (e.g. National Disability Authority [NDA], 2007), and other social groups, gave rise to more subtle forms of discrimination (e.g. Deal, 2007; Dovidio, et al., 2011).

In an effort to surpass this important limitation, implicit (or indirect) measures were developed, such as various forms of priming tasks and the Implicit Association Test; these intend to allow the capture an estimate of the relatively stable and (frequently, although not certainly observed in all implicit instruments) unconscious representations pertaining to the construct of interest without resorting to introspection, whilst minimizing opportunities for strategic responding, thus making them less susceptible to participant bias (e.g. Antonak & Livneh, 2000; Fazio & Olson, 2003). Nevertheless, issues regarding some of these methods have been pointed out by several authors, namely the weak correlations between different implicit measures of attitudes conceived to assess the same construct, which is argued to arise from low reliability (e.g. Fazio & Olson, 2003; Lane, Banaji, Nosek, & Greenwald, 2007; Hahn & Gawronski, *in press*).

Given those implicit methods' threats to validity, the relative better robustness regarding the reliability of the Implicit Association Test made it the most used implicit method in Social Psychology. The Implicit Association Test (IAT) is one of the most influential and widely used indirect time-based computerized measure aimed at estimating the relative strength of (unconscious) automatic associations (i.e. attitudes, stereotypes,…) between four concepts: target categories and attributes (e.g. Lane et al., 2007), and has also been the most used indirect instrument regarding the research on implicit attitudes towards people with disabilities (Thomas, Vaughn, Doyle, & Bubb, 2014; Wilson & Scior, 2014). Since its official release in the 1998 article by Greenwald, McGhee and Schwartz, several forms of this tool have been developed – such as paper and pencil and computerized versions, whether using words and/or pictures - and some of which evaluate other constructs besides attitudes, such as stereotypes and self-esteem, to name only a few. Mirroring the popularity of the IAT in the research of attitudes regarding other, more extensively investigated, minorities, it has also been the most used implicit tool in the study of attitudes or stereotypes towards persons with disabilities in general (e.g. Pruett & Chan, 2006; Thomas, Doyle, & Vaughn, 2007), specific disability-type groups (e.g. Enea-Drapeau, Carlier, & Huguet, 2012) or context-related (e.g. White, Jackson, & Gordon, 2006, as an example in sports).

Research has also identified several predictors and correlates of implicit and explicit attitudes of the general population, and of students and professionals working with people with disabilities which, nevertheless, also lack in consistency, due to mixed results, namely what concerns some demographical correlates such as age, sex or social economic status (e.g. Chan, et al, 2009; Yuker, 1994; Pruett, & Chan, 2006). Concerning predictor variables of explicit attitudes towards this minority, information and contact revealed to be very important (e.g. Yuker, 1994), especially when combined in strategies to attitude change (e.g. Corrigan & Penn, 1999; cit. by Chan et al., 2009). In fact, contact has shown to be effective in reducing intergroup prejudice in a number of studies, transversely to a wide array of groups and contexts, including prejudice towards people with disabilities, as an important meta-analytical test on intergroup contact theory by Pettygrew and Tropp (2006) revealed. Nevertheless, as these authors conclude, not much is known regarding the negative factors hindering contact from reducing prejudice when comparing with the facilitating conditions that enhance positive change, which is an important theoretical limitation, given that some research has also shown that contact may foster negative attitudinal shifts towards people with disabilities (Chan et al., 2009).

Notwithstanding, most literature regarding the relationship between intergroup contact and attitudes has relied almost exclusively on explicit attitudes (Vezzali & Giovannini, 2011), hence, to our knowledge, data stemming from literature concerning the relationship between contact and implicit attitudes is not yet systematized. However, the available research investigating contact as a predictor variable of implicit prejudice reveals that regular and collaborative contact is directly associated with more positive implicit attitudes (e.g. Hewstone & Swart, 2011), also in what concerns people with disabilities (e.g. Pruett, & Chan, 2006, Vezzali, & Capozza, 2011; Vezzali, & Giovannini, 2011), although not always (e.g. Hein, Grumm, & Fingerle, 2011; Wilson, & Scior, 2015).

The contention that implicit measures provide information that cannot be acquired by explicit instruments is founded in the very frequently observed tendency of a weak to no correlation between both types of measures, even though several exceptions can be found (e.g. Hoffman, Gschwendner, Nosek, & Schmitt, 2005; Payne & Gawronski, 2010; Hahn & Gawronski, *in press*). In this sense, single and dual process models of attitudes are especially important as different views regarding underlying mechanisms of information processing and prediction of behaviour, as well as the investigation on moderator variables influencing implicit and explicit (in)consistency (e.g. Payne & Gawronski, 2010; Hahn & Gawronski, *in press*).

Given the potential detrimental impact of (future) professionals' attitudes towards this population, as well as the importance of several other variables, it is fundamental to foster further development regarding the investigation regarding the processes of social cognition associated to this social group, while also accounting for its diversity, which posits a considerable challenge, both theoretical and methodologically.

In this thesis, our goals are, first, to explore the explicit and implicit attitudes of professionals who work directly with persons with disability on a daily basis. As far as we know, to the present moment, not many studies have addressed specifically these professionals' attitudes towards this minority group, specifically in what concerns the simultaneous measurement of implicit and explicit attitudes, despite the important role of these professionals as mediators between them and their interests, concerns and needs in any relevant context in their lives. Moreover, a significant part of the literature dedicated to the investigation of attitudes towards persons with disabilities tends to focus more on convenience samples of students whose academic domains will enable frequent contact with this population in the future, than on samples of actual professionals working with this population, hence constituting an important limitation (Livneh, 1988, 2012; Wilson, & Scior, 2014). To explore this issue we will test one of the most well-known and scientifically recognized and established self-report tool used to measure attitudestowards persons with disabilities, the "Attitude Toward Disabled Persons Scale – Form O" (ATDP-O; Yuker, Block, & Campbell, 1960; cit. by Yuker & Block,1986) as a measure of explicit attitudes, more specifically, an adaptation of the Portuguese version, developed by Martins e Pais-Ribeiro (2007); and, as a measure of implicit attitudes, a computerized version of a "Disability Attitude Implicit Association Test" (DA-IAT).

Secondly, our goal is also to test the relationship of implicit and explicit attitudes with contact with people with disabilities, according to the theoretical assumptions of Allport's Intergroup Contact Hypothesis (e.g. Allport, 1954; cited by Pettigrew, 1998) and its further theoretical developments leading to a unified Theory of Intergroup Contact (e.g. Pettygrew, 1998; Pettigrew & Tropp, 2006; Brown & Hewstone, 2005). Nevertheless, albeit contact has revealed to be one of the most important predictor variables of explicit attitudes, also in what concerns people with disabilities, the literature review showed that the relevant corpus seldom evaluated direct contact in a consistent and standardized manner based according to theoretical assumptions of the Theory of Intergroup Contact. In addition, and as already stated, not many data is available regarding the relationship between contact and implicit attitudes and, therefore, we intend to explore it. We will focus both in the amount of direct contact with people with disabilities, as measured by the Contact with Disabled Persons Scale (CDP; Yuker & Hurley, 1987), and a measure of the quantity and quality dimensions of contact in very broad and general terms regarding different and theoretical relevant types of relationship with persons with disabilities: co-workers, clients (i.e. targets of professional intervention), friendships and family, according to the principles established by Brown and Hewstone (2005).

The present work comprises two parts. In the first, we begin by presenting international and national data about disability numbers and associated psychosocial correlates as indicators of the prejudice and discrimination faced by people with disabilities, and its impact on their health and wellbeing (Chapter I). Next we introduce a literature review on the state of the art regarding the evolving definitions of the concepts of “disability” and “impairment”, an approach to the broad field of implicit social cognition, focusing on the main definitions of explicit and implicit attitudes, related concepts and processes, in general, and then redirecting them to the idiosyncrasies within this specific minority group. Finally, the main variables literature has shown to correlate with explicit and implicit measures of attitudes towards people with disabilities are presented – with special emphasis on contact. Several issues regarding attitude measurement are also considered, with an emphasis on professionals’ attitudes towards people with disabilities, and the interpretation of explicit-implicit ambivalence given by dual process models. Finally, the objectives and hypotheses for this study are presented (Chapter II).

In the second part, we introduce the studies developed within this thesis project objectives: the main pilot study undertaken to more adequately adapt a computerized Disability-IAT (Chapter III), as well as the leading study concerning the measurement of the implicit and explicit attitudes towards people with impairments and disabilities in a group of professionals’ working in the rehabilitation domain, and their relationship with (ongoing) contact with this population (Chapter IV). The methodology used for data collection, along with the main results obtained, as well as its discussion and general conclusions, are presented in depth for the and main studies. We end the closing chapter by presenting and discussing the main findings of the leading study; the results are interpreted having in consideration the presented literature review. A final section in this chapter is dedicated to the conclusions, limitations, and future directions.

First Part – Theoretical Background and Foundations

Chapter I

First things first: Facts and figures related to impairment, disability… And their relation to the conceptual and theoretical premises that lie underneath

"We know that equality of individual ability has never existed and never will, but we do insist that equality of opportunity still must be sought."

Franklin D. Roosevelt

1. Persons with Disabilities: From the global and European pictures to the Portuguese (assumed) reality

Over one billion persons are estimated to be living with some form of disability – including all age groups - what corresponds to about 15% of the world population (World Health Organization & World Bank, 2011; p. 29). These numbers are based on the most recent estimates that date back to 2010 and 2004, and actually show that the group of persons with disabilities represent a very expressive global minority. Moreover, these figures have evidently increased since the last monitoring performed by WHO in the 1970's, that established a prevalence estimate of 10% for this population group (WHO & WB, 2011).

In Europe, it is estimated that around 80 million people have a disability [European Commission, Communication No. 636 European Disability Strategy 2010-2020, 2010; European Disability Forum (EDF), no date], which corresponds to a proportion of over 15% of the total European population.

In what concerns Portugal, there are not many statistical studies regarding the prevalence of disability amongst the population, and those available present divergences related to different theoretical and methodological principles and objectives that unable the establishment of comparisons regarding its general incidence and prevalence throughout time [Centro de Estudos Sociais (CES), 2010].

Taking as reference the three studies with census character undertaken in Portugal (as they include – almost - all age groups), the prevalence of persons with impairments[1] ranged between 9,16% in 1995, (Secretariado Nacional de Reabilitação – SNR - 1996), and 6,1% in the 2001 population census (Gonçalves, 2003). More recently, the 2011 population census data revealed a proportion of 18% of the population with

---

[1] The operational definitions of the concepts of "impairment" and "disability" in INIDD's data presentation report are not very consistent throughout the document; it indicates this proportion under the "label" "disability/impairment". We opted to use "impairment" ("deficiência"), as it seems to be the more accurate "label" according to the information provided by that document.

5 or more years of age who reported having a lot of difficulty or being unable to perform at least one of the 6 daily activities questioned (“see”, "hear", "walk", "memory / concentration", "bathing / dressing", "understanding others / to be understood"); and with regard to the population aged 65 years and above, about 50% [Instituto Nacional de Estatística (INE), 2012b] indicated having a lot of difficulty or being unable to perform at least one of the activities mentioned above. In addition, it is expected a significant growth in the number of persons with disabilities in forthcoming years throughout the world much do to factors such as the ageing of the populations as a result of an increase in the average life expectancy, which is linked to advances in medical care. This will inevitably bring economical, political and cultural consequences to governments and societies (Coleridge, 1993; Ingstad, 2001, cited by CRPG & ISCTE, 2007b).

As those values seem quite strikingly disparate, it must be clearly stressed that each of the instruments that yielded them are based in very different theoretical and methodological assumptions, as already stated, what necessarily reflects on the conceptualization and operationalization of the concepts of “impairment”, “disability” and “handicap”. Once the INIDD questionnaire was based in WHO’s International Classification of Impairments, Disabilities, and Handicaps (ICIDH), now considered obsolete, it is therefore not possible to compare in detail the data obtained in this study with those more recent. The last national census (INE, 2012a, 2012b) was developed according to the International Classification of Functioning, Disability and Health (ICF), which represents a major paradigm shift from the (bio)medical model to one that is intended to be bio-psychosocial. Issues related to the conceptual definition of relevant terms in this field of study are indeed of great importance and will be briefly discussed below, as they presented significant methodological implications and challenges (also) to the present investigation work.

Something common to all of these, and other, national data, however, and that is also implied by the results of broader international studies (e.g. CRPG & ISCTE, 2007b; Eurofund, 2013) is that they all suggest that disabled persons’ lives are specially marked by experiences of prejudice, discrimination and social inequality at various levels, due to indicators of social inclusion / exclusion, as well as by the worsening of the difficulties experienced owed to other markers of social differentiation such as age, gender, ethnicity or sexual orientation (e.g. CRPG & ISCTE, 2007b; Pinto, 2009; cit by DRPI - Portugal, 2012; European Union Agency for Fundamental Rights, 2013).

In this sense, the Third European Quality of Life Survey (EQLS), undertaken in 2011, among the EU27 group countries, has revealed that having a limiting disability or health condition and being unemployed were linked to disadvantages regarding autonomy, treatment with dignity and respect, social support and social inclusion. Furthermore, persons reporting long-standing physical or mental health problems, illness or disability were more likely to experience difficulties accessing healthcare, which also includes struggling with its costs. Also, women, older persons, persons having a limiting disability or health condition, as well as unemployed people, experienced a significant negative impact in the self-reported general health, augmenting also the likelihood of reporting material deprivation (Eurofound, 2013).

In further exploring these issues, and concerning the Portuguese reality, as the results of the CRPG and ISCTE (2007a) study reveal, from the 8,2% of the universe of respondents with disabilities, the majority were women (69,7%), more than twice the proportion of men (32,1%). Furthermore, the prevalence of disability evidently grows along all age groups, peaking in the age group of 65 to 70 years (representing about 41% of the respondents with disabilities). It has also been observed that the schooling level of the disabled was more than twice below the national average, being closely accompanied by an unemployment rate twice higher than the national mean. It is not surprising therefore that, given this general context of overlapping social inequalities, this population is particularly vulnerable to social exclusion, which also is often associated with poverty, as already revealed by international studies on a larger scale in sampling terms. Indeed, these social inclusion/exclusion indicators naturally point, as a whole, to the already recognized two-way causal relationship between poverty and disabilities (e.g. CES, 2010; WHO & WB, 2011).

Furthermore, and in what specifically refers to Europe, the several years of the world economic crisis, begun in end 2007, have markedly affected the life conditions of persons with disabilities, which have significantly worsen since then, with above-average increases when compared to the life conditions of the population without disabilities; hence, according to the third EQLS (Eurofound, 2013), and the European Foundation Centre (EFC), the poverty rate augmented substantially between 2008 and 2010 in several European countries, having grown 25% in Portugal (EFC, 2012), and more markedly affecting this minority group.

In sum, data clearly suggests an interaction between impairments and social contexts that significantly impacts the lives of persons with disabilities in general, and necessarily their health and wellbeing. Next, we shall consider in more detail the impact of prejudice and discrimination in this minority group's health.

2. On the impact of prejudice and discrimination in people with disabilities' health: a brief overview

The previously presented demographic data suggests that persons with disabilities from all ages have poorer health outcomes when compared with their non-disabled peers. These differences are significant as extensive research evidences already demonstrated, and may be boosted by experiences of *disablism* (Emerson et al., 2009; cited by Emerson, Madden, Graham, Llewellyn, Hatton, & Robertson, 2011), defined as prejudice, stereotyping or "institutional discrimination" against people with disabilities (Council of Europe, n.d.). In this latter case, direct effects of *disablism* in these groups' health include the existence of a systemic disability discrimination, which impedes access to adequate health, social care and infrastructures, such as the exclusion of women with physical and cognitive impairments from breast cancer screening (Emerson et al., 2011; Freyhoff, n.d.), or general gynaecological examinations if considered too difficult or time consuming (e.g. Nosek & Holland, 1997; cited by Nosek, 2010), for example. Also, Emerson and colleagues (2009; cit. by Emerson et al., 2011), argue that there are evident social gradients in the incidence of many health conditions or impairments related to disability, which are probably multifactorial in nature, and assume different levels of significance across the life span. This means, for instance, that those more relevant in childhood reflect first and foremost the effects of socially patterned exposure to material and psychosocial risks which undoubtedly have the potential to originate health conditions linked to disability (e.g. families from low social economic status or poor dietary nutrient intake, whether *in utero*, or in early years of life; furthermore, concerning working age adults with disabilities, their exclusion from the labour market can aggravate social gradients, while social conditions such as welfare policies, strongly impact employment rates among this population. (Sen, 2001; cited by Emerson et al., 2011).

Moreover, with the publication of the International Classification of Functioning, Disability and Health (ICF) in 2001, the World Health Organization acknowledged, for the first time, the role of environmental factors, such as attitudes, relationships, services and policies, in causing disability - and hence with potential to also significantly impact individuals' health and wellbeing (e.g. WHO & WB, 2011). It also proposes a universal bio-psychosocial model of all human functionality, being disability conceptualized in a continuum, thus echoing the work developed in some academic domains and, to some extent, several civil rights movements' demands, particularly those driven by disabled persons (WHO & WB, 2011). Nevertheless, societies are still contending with the medical model's perspective and assumptions, frequently treating disability as a synonym of health condition, while those responsible continue to forget to address the context and the range of social conditions and environmental factors that would contribute to provision these people's effective needs according to their particular health conditions or impairments (Emerson et al., 2011).

In this sense, a recent report by the European Union Agency for Fundamental Rights (FRA, 2013), revealed striking data concerning multiple inequalities also associated to multiple discrimination based on more than one ground (e.g. sex, ethnicity and/or disability) in access to and quality of healthcare. More specifically, healthcare users and providers alike described several incidents of alleged direct discrimination, such as delay or refusal of treatment, experiences of undignified treatment, stereotyping perceived as discriminatory or lack of informed consent/involuntary treatment (as sterilisation of, or forcing women with disabilities to have abortions). However, these were more immediately perceived by healthcare users as infringements of patients' rights rather than episodes of discrimination. In addition, that investigation also showed that while healthcare providers are perfectly aware of several barriers in healthcare (e.g. communication and language barriers), nevertheless they are generally reluctant to describe them in terms of discrimination – specially direct discrimination – and to recognize that unequal treatment is a reality in healthcare settings, much due to the ethical obligation imposed by several professional ethic codes regarding equal treatment; therefore, it is not easy for them to recognize how some behaviours may be founded in attitudes and stereotypes that can negatively affect particular minority groups, such as persons with disabilities (FRA, 2013).

Building on literature's suggestions regarding the existence of indicators of social exclusion/inclusion, Emerson and collaborators (2011) stress that the aforementioned health outcomes surpass the boundaries of the specific health conditions related to these persons' disability. For instance, in high income countries: **1)** obesity and mental health problems have highly increased rates among people with intellectual and physical disability; **2)** higher rates of ischaemic heart disease, stroke, high blood pressure and diabetes among persons with mental health problems; and, an issue many times forgotten **3)** family carers of children or adults with disabilities also face poorer health outcomes (as an effect of being discriminated against by association; Freyhoff, et. al, n.d.). These more recent observations give support to earlier research that found an association between the attitudes of rehabilitation professionals and rehabilitation processes outcomes (Chubon, 1982). Furthermore, professionals working in other settings, such as teachers and counsellors, have also shown to hold negative attitudes towards people with disabilities, while, for instance, impacting in therapy outcomes (Chubon, 1982), imposing barriers to equality, and, ultimately, hindering people with disabilities from fully participating in society.

Furthermore, the increased risk of exposure to socio-economic disadvantage to which *disablism* also contributes indirectly, may account for 20 to 50% of the risk of worse mental and physical health among children with intellectual disabilities (Emerson et al, 2011). In addition, *disablism* entails even higher barriers and impediments to a full participation in mainstream society for those with severe disabilities, in situations of major dependence or with complex needs, as a study undertaken in 2007 in several European countries revealed, this research authors identified the values of modern societies as the major contributor to this population discrimination, namely of what represents a life worth living (Freyhoff, et al., n. d.). Thus, as many persons with severe disabilities and complex needs face very significant limitations in their abilities to communicate, to interact or to participate in conventional day to day life and prevailing contexts, they are frequently seen as a burden (Freyhoff, et al., n. d.), which is consistent with the medical model of disability and the idea of "personal tragedy" entailed by orthodox normalcy standards. Furthermore, research has also suggested that, irrespective of the type of professional, attitudes towards different disabilities may vary (Chubon, 1982), with more negative attitudes towards persons more severely impaired (e.g. totally blind or deaf), with the most "non-normal" appearance or behaviour (Yuker, 1982).

Explaining, as Wong, Chan, Cardoso, Lam and Miller (2004) state, rehabilitation professionals are the gatekeepers regarding information and services offered to people with disabilities (as professionals from other contexts also are, we might add), for it is not difficult to understand that negative attitudes stemming from them may lead to restrictions in service options and alternatives, and thus affecting the provision of quality services and rehabilitation outcomes (Paris, 1993; cited by Chan et al., 2009).

Given the theoretical and methodological importance of the medical, social and biopsychosocial models for the conceptual definition of "impairment" and "disability", it follows a brief discussion on the three, as well as the operational definition chosen for the development of the empirical studies presented in the second part of the present work.

3. A Fundamental Remark: "Impairment" and "Disability" are not synonyms

The concepts and terminologies of "impairment" and "disability" as well as other related expressions such as "handicap" have been changing throughout time according to the socio-historical and cultural contexts and respective predominant values and reference frameworks. Historically, their conceptualizations have focused mainly in medical model assumptions and definitions stating "patterns of normality", being "disability" strong and broadly regarded as a personal tragedy and an individual failing associated with "defective" or impaired, minds and bodies (Barnes & Mercer, 2011a), while privileging interventions exclusively centred in the individual, the recognition of his or her special needs and ineptness, and the creation of specialised and specific services, favouring institutionalisation mechanisms (e.g. CRPG & ISCTE, 2007b, 2007c). This model is thus moved towards the prevention, treatment and/or cure of these encountered individual flaws, under the power and authority of credentialed professionals, whose diagnostic and interventions prevail above any person, social, attitudinal and contextual barriers (e.g. CRPG & ISCTE, 2007b, 2007c; Barnes & Mercer, 2011a, 2011b). Culturally then, this framework favoured the stigmatisation, prejudice and exclusion of persons with disabilities as their integration in the regular services and social structures was perceived as incompatible (CRPG & ISCTE, 2007b).

The medical model has been exerting significant influence since its origins in the 19th century Western industrialized societies, and has delved right through the next century, until the advent of civil rights' movements of the 60's and 70's of the last century, in the United Kingdom and the United States of America, that gave rise to people with disabilities self-advocacy movements against the disability orthodoxy imposed by it. These greatly contributed to the emergence of the social model of disability, focused in the relationship between the corporal characteristics of the individual, including impairments of any type, and the conditions of the social context he/she lives in. From this theoretical point of view, the society imposes an experience of disability to those who have some kind of impairment, independently of it being temporary or not (an important distinction for the medical model, since it allows to distinguish between diseases and disability), because it fails to include the vast array of human diversity. The social model of disability thus constitutes a shift from the focus in the individual "incapacity" as the source of dependency and marginalization, to the fundamental role assumed by the social, economical, cultural and political "disabling barriers" in their exclusion from effectively participating in society, and in denying their citizenship rights (CRPG & ISCTE, 2007b; Finkelstein, 1980; DeJong, 1981; cited by Barnes & Mercer, 2011b). Moreover, this model also rejects the traditional and erroneous association between "impairment" and "disability", as established by the medical model, since it is perfectly possible that someone with an impairment does not experience disability, depending on the societal level of adjustment to include functional diversity (CRPG & ISCTE, 2007b,c). The social model thus conceives disability as a social construction problem and not a personal attribute (e.g. Barnes & Mercer, 2011a, 2011b, WHO & WB, 2011).

More recently, the biopsychosocial model of disability, was proposed as a reconciliation framework between those models, and was adopted by the World Health Organization (WHO), that made it clear with the publication of the ICF in 2001. Within this framework, "disability" (as well as "functioning") is then defined as resulting from the interactions between health conditions (diseases, disorders, injuries) and contextual factors, including external environmental factors (e.g. social attitudes, architectural characteristics, legal and social structures and climate) and internal personal factors (e.g. gender, age, coping styles, social background, education, overall behaviour pattern, character and other factors that influence how disability is experienced by the individual; OMS & DGS, 2004). Hence, the biopsychosocial model views "disability" as a decrement in each functioning domain; it is an umbrella concept that includes impairments, limitations in activity and restrictions in participation, thus indicating the negative aspects of the interaction between an individual (with a health condition) and his or her contextual factors (environmental and personal). Furthermore, “disability” can occur to anyone throughout the life cycle, and be either permanent or temporary (OMS & DGS, 2004; CRPG & ISCTE, 2007b).

Nevertheless, the biopsychosocial model is not exempt from critics, especially given its emphasis in negative vocabulary (e.g. limitations in activity), still significantly mirroring a medical model framework.

These “competing” models have thus necessarily also marked investigation, transversely to several academic domains, in addition to the cultural, social and political idiosyncrasies of a given time and place. Hence, the instruments aimed at measuring the incidence and prevalence of impairments, handicaps and disabilities are also a reflection of their time, which leads to difficulties in their results interpretation, while comparability is frequently impossible.

The terminology to use in this area still raises significant frictions, and has potential detrimental impacts whether at individual, academic, social or political levels. In fact, the biopsychosocial framework encompasses several challenges in the operationalization of several constructs, as shall be seen in the second part of the present work.

Chapter II

Attitudes towards persons with disabilities: on its origins, correlates, and measurement.

"[…] I was born with a neuromuscular disability, which makes me move on an obedient electric wheelchair. It seems that in this country (…) this unfortunate is seen as a heinous label of incapacity for work and a burden for any employer. This is what I've been feeling throughout all these years of struggle with the buttocks firmly seated on it. […]"

Rui Machado (2014, January 20)

1. The Genesis: Where do attitudes towards persons with disabilities come from?

As already exposed above, several indicators have consistently suggested the existence of overlapping social inequalities that make persons with disabilities especially vulnerable to social exclusion in many different domains of life. The bio-psychosocial model also acknowledges the role presented by environmental and contextual factors in its conception of health and disability, where attitudes are important and explicitly considered as potentially impacting in everybody's life and thus possibly presenting barriers with a very detrimental impact in health and quality of life (Chan, et al, 2009; Emerson et al., 2011). However, before moving on to the specificities related to attitudes towards persons with disabilities, one must provide a definition of such a construct, as well as of other important and related concepts, while simultaneously encompassing its relationship with relevant theoretical frameworks within the field of (Implicit) Social Cognition.

1.1. The definition of "attitude" from an implicit social cognition point of view

The construct of attitude has a lengthy history in Psychology and is considered central to the whole domain of Social Psychology by several researchers. In fact, a very significant part of the literature in this scientific domain has long been devoted either to its definition (while eliciting intense debates, that, in fact continue in the present day), or to its operationalization and measurement, regarding a large array of attitudinal objects, whilst naturally being somewhat permeable to the historical and social contexts they were forged in. As such, it is not surprising that several definitions of attitudes exist. More recently, and given the influential role of implicit social cognition and its related measures in investigation, leading to "a substantial reorientation of priorities and perspectives" (Gawronski, 2007; p. 574), new theoretical and methodological challenges and controversies arose regarding attitude's (Gawronski, 2007), and related constructs', definition.

In a recent review, Bohner and Dickel (2011) state that most researchers agree that "an attitude is an evaluation of an object of thought" and that, "attitude objects comprise anything a person may hold in mind, ranging from the mundane to the abstract, including things, people, groups and ideas." (p.392). Nevertheless, and as Gawronski (2007) also asserts, several definitions diverge, being the existence of a single type or two types of attitudes (implicit and explicit), or their stability, important points of debate, with perspectives viewing attitudes as stable entities stored in memory contrasting to others considering them to be transient judgements constructed with the available information in that very moment.

The umbrella definition presented by Eagly and Chaiken in 1993, is particularly prominent in the literature (Lima & Correia, 2013), and, more recently, while contending with the more recent developments on implicit social cognition, those authors have argued that such a definition maintains its utility. According to Eagly and Chaiken, an attitude is a *hypothetical construct*, meaning it is not directly observable. It is a latent variable, an inference, regarding the psychological processes that might explain the relationship between a given situation and subsequent observed behaviours. This construct refers to "a *psychological tendency* that is *expressed by evaluating* a *particular entity* with some *degree of favor or disfavor*" (Eagly & Chaiken, 1993; cit. by Eagly & Chaiken, 2007; Lima & Correia, 2013; Schwartz & Bohner, 2001)); emphasis not in the original quote), and includes three fundamental features that together, refer to an individual's predisposition to evaluate an attitude object in a certain way: **1)** *evaluation*, which concerns all types of evaluative responding or judgement expression: overt or covert responses, cognitive (beliefs and thoughts), affective (emotions and feelings) or behavioural (intentions and overt behaviour). These evaluative judgements have a *direction* or *valence* (favourable / unfavourable), as well as an *intensity* (that opposes extreme to weak stances), and a certain degree of *accessibility*, or the probability of being activated automatically when the individual meets a determined attitudinal object. This last feature is related to the attitude's *strength*, the way it was learned and to the frequency with which it is elicited (Eagly & Chaiken, 2007; Lima & Correia, 2013). Furthermore, these reactions do not necessarily need to be consciously experienced by the individual, and can, in fact, be unconscious (e.g. Eagly & Chaiken, 2007); **2)** this evaluation is directed towards a specific *entity* or *attitude object*, which may be present or can be remembered upon presentation of an object's evidence or *proxy* (e.g. Fazio, 1995; cited by Lima & Correia, 2013). Attitude objects can be something abstract (e.g. an ideology, such as conservatism), concrete (e.g. bugs), an individual (e.g. Barack Obama), or collective (e.g. Syrian immigrants); and, **3)** as a *psychological tendency*, attitudes reflect an interior state based in the individual's past experience that establishes a tendency to respond more or less positively or negatively to a determined attitude object. This tendency is relatively stable temporally, hence differencing from other hypothetical constructs that can also be inferred from observed behaviours, such as personality traits which are considered more stable (Eagly & Chaiken, 2007; Lima & Correia, 2013).

In addition, from the perspective of implicit cognition, the idea of "mental association", specifically evaluative and semantic associations (Greenwald, Banaji, Rudman, Farnham, Nosek, & Mellott, 2002), is quite influential. Hence, from this point of view, the construct of attitude can be defined as the mental association between an attitude object and a positive or negative evaluation (Hahn & Gawronski, *in press*).

Moreover, and following implicit social cognition origins, recent theorizations on the concept of attitude draw a distinction between explicit and implicit attitudes. Explicit attitudes are commonly viewed as self-reportable evaluations, implying that the individual is aware of them, or of its expression elicitation by a measuring instrument; they are, in sum, consciously accessible, and presumed to be activated through a more deliberative process requiring cognitive effort (e.g. Eagly & Chaiken, 2007). On the other hand, implicit attitudes are conceptualized as not consciously detectable (e.g. Greenwald & Banaji, 1995), and can be automatically, uncontrollably, effortlessly activated when persons are confronted by the attitude object or any cues associated with it (e.g. Bargh, Chaiken, Govender, & Pratto, 1992; Fazio, 2007).

Prejudice is a very intimately close construct, and is defined by several authors as being an attitude, traditionally negative in valence; nevertheless, more recent views define it as "an attitude or orientation towards a group (or its members) that devalues it directly or indirectly, often to the benefit of the self or own group", and independently of its valence[2] (Spears & Tausch, 2015, p.442). In addition, one can also hold positive prejudice towards the ingroups he or she belongs to (Nelson, 2006). Moreover, within an implicit social cognition's point of view, prejudice can be defined as a mental association between a social group and a specific evaluation (e.g. people with disabilities and bad).

Stereotypes are conceptualized as a cognitive structure containing knowledge, beliefs and expectancies regarding a determined social group (Pendry, 2015), or individual members of that group, particularly those that allow us to differentiate between groups (Stangor, 2009). From an implicit social cognition's point of view, a stereotype is a mental association between a social group and (a) semantic attribute(s) (e.g. people with disabilities and warm; Hahn & Gawronski, *in press*), that quickly come to mind when we think about that group (Stangor, 2009). Finally, discrimination, can be defined as the negative action that one carries out based on prejudice's evaluative judgements (e.g. Allport, 1954; cited by Chan, et al., 2009).

The basic assumption underlying those definitions is that these mental associations can be activated automatically upon encountering a specific object and, in turn, influence responses on implicit measurement tools presenting stimuli which are conceptually congruent or incongruent with these associations. Hence, if a mental association is strong enough, the activation of one concept can also automatically spread to other associated concepts, which can equally influence one's answers (e.g. Hahn & Gawronski, *in press*).

1.2. Attitude functions

Attitudes serve numerous psychological needs. Several authors presented their own perspective on attitude's functions throughout time, overlapping in several key aspects. While basing in empirical evidence,

---

[2] For this reason, the terms "attitude" and "prejudice", are frequently used interchangeably throughout the present work.

Haddock and Maio (2015; see also Dunn, 2015, p. 58-59) stress five particularly important functions: (1) *object appraisal function*, referring to the power of an attitude to serve as an "energy-saving device", mainly strong and highly accessible attitudes, as it allows the classification of the positive and negative attributes of objects for the purposes of action in the social world, thus allowing faster and easier attitude-relevant judgements and behaviour guidance processes. Related to this operation is the (2) *utilitarian function*, as attitudes direct individuals towards the search and obtaining rewards from attitude objects (e.g. connections with others, material goods, goal pursuit), while avoiding punishments (e.g. rejection by others, loss, failure). Hence these two functions help the individual to extract meaning from the social world thus rendered more comprehensible, through the classification and categorization of objects, and to respond to the environment and other people in it; (3) *social adjustment* is promoted through processes helping to identify and to dissociate from liked and disliked people, respectively; (3) *ego-defensive function*, as it aims at protecting individuals' self-esteem, through the avoidance of social threats, including projecting feelings of inferiority on outgroup members in order to maintain feelings of superiority or to enhance a self-image and sense of self-worth; and, (4) *value-expressive function*, as an attitude may express a person's self-concept, and core values or beliefs, and thus promoting self-satisfaction and self-affirmation while reducing openness to persuasion or attitude change.

Next, we will focus on the mechanisms underlying these functions.

1.3. Attitude sources, formation, and content

The psychological mechanisms through which attitudes are formed (and changed) are naturally and intimately linked to the functions and needs they are supposed to meet. Hence, attitudes help individuals navigate the world in ways allowing the management or reduction of its complexity (Dunn, 2015). Object appraisal function is perhaps the one that best explains why we construct attitudes in the first place (Haddock & Maio, 2015).

Since our first experiences in contacting with the environments we are born into and in which we further develop, we engage in several experiences that allow us to mentally structure and respond to our (social) world through affective, cognitive and behavioural processes that establish associations linked to attitude objects, which are then considered attitudes' antecedents. These associations can, in turn, reflect one or a combination of those precursors (e.g. Eagly & Chaiken, 2007: Fazio, 2007). Nevertheless, affective processes appear to be the most predominant as well as the most basic, or primary, in attitude formation, although attitudes can also originate from cognitive processes (Fiske, 2010). According to Cacioppo and Bernston (1999; cited by Fiske, 2010), people want to understand what to approach and what to avoid, something that encompasses attitudes functions. In this sense, learning processes such as classical conditioning (via repetition and association), instrumental conditioning (through rewards and punishments), and their social learning counterparts – modelling (using imitation), and vicarious reinforcement (by means of observational learning) – as well as mere exposure, constitute fundamental affective processes of attitude formation (and change), concurring to that approaching-avoidance motivation. Also, any of these can operate in an automatic fashion, with minimal cognitive, or reasoned, activity (Fiske, 2010).

As already stated, one's attitudes can also be primarily based on considerations regarding positive and negative attributes of the attitude object, as in expectancy-value frameworks (e.g. Fazio, 2007). Beliefs are fundamental cognitions given their impact on attitudes; stereotypes are an example of beliefs influencing individuals' judgements and behaviours.

In what concerns behavioural processes antecedents of attitudes, people may infer their attitudes basing themselves in recalls of their previous actions (frequency) towards a specific attitude-object when they do not have access to their opinion on it, which is specially probable to occur when attitudes are weak or ambiguous, as Bem's self-perception theory states (1972; cited by Haddock & Maio, 2015). Moreover, research also shows that simply believing in having acted in a determined way towards an object is enough to shape attitudes (Haddock & Maio, 2015). On the other hand, stronger attitudes can be influenced by counter-attitudinal behaviour, because it induces cognitive dissonance, an aversive state that stems from holding inconsistent beliefs or behaving contrarily to one's beliefs, which motivates individuals to reduce it (e.g. Zanna, Higgins, & Taves, 1976; cited by Haddock & Maio, 2015) so that they can take decisions (Harmon-Jones, Amodio, & Harmon-Jones, 2009; cited by Haddock & Maio, 2015). In addition, direct physical actions with evaluative implications or connotations initiated by individuals (e.g. nodding or shaking the head, arm extension or flexion) can directly affect attitudes favourability when arguments or unfamiliar stimulus are simultaneously presented under certain conditions (e.g. Briñol & Petty, 2003; cited by Haddock & Maio, 2015).

These processes are naturally and structurally associated with each other; for instance, in general, if one holds positive or negative beliefs regarding an object, his or her object-specific feelings and behaviours are also probably positive (Haddock & Maio, 2015). Nevertheless, structurally, both positive and negative attributes concerning an attitude object are stored in memory, along two separate and orthogonal dimensions reflecting the relative quantity of positive or negative elements, within and among the affective, cognitive and behavioural antecedents of attitudes; hence, an individual can possess any possible combination of positivity and negativity towards that object, including roughly equal parts of attributes from both valences, hence representing ambivalent attitudes (e.g. Dovidio, et al., 2011; Haddock & Maio, 2015).

Recent investigations have also shown this antecedents' uniqueness, as attitudes regarding some issues or objects tend to be based on affect, whereas others tend to be more rooted on cognitive and behavioural processes, while also suggesting individual differences on the likelihood of basing the formation of attitudes on more cognitive or affective processes (Haddock & Maio, 2015). Furthermore, as Fazio (2007) states, "the processes by which the attitude was formed and its informational basis may have implications for the resulting strength of the object-evaluation association and, hence, the accessibility of the attitude from memory".

Furthermore, upon further encounters with an attitude object, attitudes can be positively, negatively, ambivalently or neutrally expressed through any, or a combination, of those affective, cognitive and behavioural processes as well, and thus are also viewed as consequences of attitudes (Eagly & Chaiken, 2007). The experiences collected through our development lead to the organization of information of all sorts in our minds through processes of categorization of any objects encountered. Categorization processes create mental representations, or schemas, about specific objects or people from specific categories, whose content includes knowledge, expectancies about objects, people or groups, and what attributes define them. Schemas, also identified as stereotypes, functionally act as heuristics, a well-used, under optimal rule of thumb, affecting how fast one perceives, notices and interprets (and encodes) the available information, and, ultimately, makes judgements and decisions. Heuristics thus promote automatic processes of evaluative judgement – unintentional, effortless, frequently unconscious and not expected to interfere with other concurrent cognitive processes – (also) of person and social groups, upon categorical activation (Pendry, 2015), especially if certain conditions are met - as time pressure or lack of motivation to control prejudiced answers – hindering controlled, deliberated, processes to operate (e.g. Hahn & Gawronski, *in press*).

In fact, it seems we act as “cognitive misers”, as brains are information processors of very limited resources, categorization assumes a vital role in human perception, cognition and functioning, by helping one cope with the burgeoning amount of information in the environment. Hence, categorization helps people to abstract meaning from their perceptions and to develop heuristics and other principles that allow for information simplification in thinking and deciding about important features in their environments. In this sense, stereotypes, prejudice, and discrimination are considered part of “normal” psychological processes (Dovidio, et al., 2011; Pendry, 2015). The social categorization process, thus fosters the creation of “ingroups” (“us”) and “outgroups” (“them”); outgroup elements are perceived by ingroup members as being more like one another (outgroup homogeneity effect), than they are, while viewing themselves and their presumed peers as distinct and unique individuals (e.g. Oakes, 2001; cited by Dunn, 2015; Spears & Tausch, 2015). This minimization of differences among individuals within outgroups, and the enhancement of dissimilarities between groups, influences the nature of subsequent impression formation and behaviours, as these perceived features are treated as character-based traits, that originate stereotypes subsequently applied to individual members of each group (Dunn, 2015).

These are also the underlying mechanisms leading to prejudice towards PWD, that is then treated as any other outgroup. In general, and broad, terms, a disability is considered a *stigma*, an attribute perceived to have a generally negative feature in a specific context and culture (e.g. Corrigan, 2014; cited by Dunn, 2015). On the other hand, as Dunn (2015) states, “disability is also *stigmatizing*, serving as a social marker delineating people with disabilities as distinct [the “outgroup”, “them”] and somehow different from nondisabled people [the “ingroup”, “us”]”, because of the social categorization process that deems them as targets of social biases based in frequently negative, at times ambivalent, and, more rarely, positive judgements.

Although useful in several situations, due to savings in time and effort, this process can have pernicious effects, and be socially costly as activated schemas may bias the interpretation of other people’s behaviour, as well as attitude’s expression and behaviour. In this sense, since group membership is based in the perceived similarity and differences between “us” and “others”, the probability of prejudice and discrimination to occur grows (Dunn, 2015).

1.3.1. On the origins of attitudes towards Persons with Disabilities: specific features and correlates

Although the social cognitive mechanisms underlying attitudes and prejudice formation and change are the same, there are some aspects on these features that are particular to the prejudice towards people with disabilities. In this sense, several variables have been shown to influence attitudes towards outgroups in general, according to several influential frameworks within Social Psychology, emphasising different influential factors related either to explicit or implicit measures. Nevertheless, in what specifically concerns the attitudinal sources of negative attitudes people with disabilities or disabilities, the majority of data gathered and systematized in reviews regarding variable antecedents of attitudes, as well as their correlates, respect to research using self-report instruments. Therefore, one of the most influential reviews by Livneh (1988, 2012) - which, given its utility, will be presented below - also reflects such reality; given this caveat, whenever data regarding implicit attitudes correlates are available, they will also be referred where relevant or more adequate.

Livneh’s (1988, 2012) extensive literature review aimed at revealing the main roots and correlates of negative attitudes or prejudices towards PWD, while basing in theoretical and empirical approaches perceivable in terms of cause and effect relationships (Livneh, 2012). However, the categories of negative attitudes’ sources proposed by this author, overlap frequently, hence evidencing their complex nature (Chan et al., 2009; Dunn, 2015; Livneh, 1988, 2012). Thus, additionally to the “traditional” mechanisms of attitude formation already referred above, negative attitudes and prejudice towards people with disabilities roots and correlates include (Chan et al., 2009; Dunn, 2015; Livneh, 1988, 2012):

Social and cultural conditioning processes leading to negative attitudes emergence due to the influence of dominant and pervasive social and cultural norms, standards and expectations regarding aspects such as physical attributes, personal productiveness and achievement, socioeconomic and health status. Any sizeable deviation from these expectations often leads to the formation of negative attitudes, and to stigmatization.

Childhood and current situation influences accounts for causes presumably originated in early childhood experiences (such as parenting practices that influence the construal of child’s beliefs and value systems regarding health, illness and what it is considered normal) and to those associated with current situational and interactional experiences: fear that association with persons with disabilities may be interpreted as equally reflecting one’s own psychological problems or of being contaminated while interacting with a disabled person.

Anxiety-provoking unstructured social situations. Social interactions with people with disabilities are often ambiguous and unfamiliar regarding the nature and implications of disability, and thus anxiety provoking, particularly when social rules and regulations for adequate interaction are not (well) established, as is often the case. Lack of contact and exposure to people with disabilities is hence a very important factor on the origins of negative attitudes and prejudice towards people with disabilities, as resulting from an initial process of categorization, as already stated. Given the importance of contact with PWD in the formation of attitudes towards this group, it will be more specifically developed below.

Prejudice-eliciting behaviours. Some particular behaviours of PWD such as hostility, dependence, insecurity and the need for assistance, may facilitate the maintenance and strengthen prejudicial beliefs and feelings towards them, even if they are not accountable for those actions. Furthermore, negative image portrays of PWD in media may also potentiate their devaluation by nondisabled observers.

Disability-related factors. The degree of attitudes' negativity also depends on the presence of factors such as 1) *perceived severity* - subjectively less severe disabilities perceived more positively; 2) *visibility and cosmetic involvement* - highly visible disabilities or greater cosmetic involvement are more negatively rated; 3) *contagiousness* – the more contagious a disability is recognized to be, the more negative the triggered reactions from nondisabled people; and, 4) *predictability* – curable disabilities (i.e. disabilities with more predictable prognosis) are more positively judged than permanent disabilities.

Shared responses to minority groups. As with other minority groups, people with disabilities are often marginalized because of particular features, especially disability visibility (e.g. an evident physical difference) or visible recognition of its presence (e.g. distinct body movement, white cane), which elicit negative stereotypes, prejudice and discriminatory behaviour from members of majority groups, while also frequently associated to advocating isolation and segregation of persons with disabilities from the rest of the population. (e.g. Safilios-Rothschild, 1970; cited by Livneh, 2012).

Aesthetic (-sexual) aversion, is elicited by the sight of a person with a visible disability, and triggers feelings of repulsion and discomfort when people without disabilities contact with certain disabilities such as amputations or cerebral palsy. Negative attitudes thus emerge from reactions including aesthetic aversion, anxiety invoked by threats to one's body image or integrity and guilt, and from more cognitive determinants, such as worries, concerns and misconceptions regarding the nature of disability and impairments.

Fear of death thoughts. The loss of a body part, mobility or any physical function is symbolically linked to one's Ego and death and might, therefore elicit anxiety upon encounters with people with disabilities, that act as reminders of own mortality, hence resulting in negative affect, avoidance and withdrawal from people with disabilities. To our knowledge, only one recent study measuring both implicit and explicit attitudes also evaluated this factor importance (Pruett & Chan, 2006). However, it was not, by itself, a significant predictor of both explicit and implicit attitudes.

Hierarchical attitudes towards disability. Several investigations and previous reviews suggested the existence of a hierarchy of disability acceptability among nondisabled people (e.g. Chubon, 1982; Chan et al., 2009), including professionals working with this population, such as teachers, counsellors and hospital staff (Chubon, 1982), which has been supported with more recent research (e.g. Chan et al., 2002). For instance, it has been consistently observed that physical disability is more positively perceived than mental disabilities, and intellectual disability to be more favourably regarded than psychiatric disabilities (e.g. Chan et al., 2002; Chan et al., 2009). In sum, it has been generally shown that when considering a continuum ranging between a physical disabilities' pole and a cognitive and mental-health related disabilities pole, attitudes become progressively more negative the closer to the latter (Chan et al., 2009; Dunn, 2015).

Moral beliefs regarding disability. The sin-punishment-disability triad is a psychodynamic mechanism that has been extensively reported in the literature (Chan et al., 2009). In many individuals' minds disability is often regarded as a punishment for sins or other evil misconducts committed either by the person with a disability or by someone in his or her family, leading to beliefs of dangerousness and the trigger of fear and, consequently to PWD rejection (Chan et al., 2009; Dunn, 2015).

Personality variables. Personality correlates such as high levels of authoritarianism, ethnocentrism, rigidity, narcissism, anxiety and aggressiveness, as well as low self-esteem, ambiguity intolerance or lack of body satisfaction have been found to be associated with more negative attitudes towards PWD, and may, therefore, foster their development.

Demographic variables. People without disabilities' sex, age, educational level, and socioeconomic status have previously been found to be specially relevant determinants of negative attitudes towards PWD (e.g. Livneh, 2012). Nevertheless, inconsistencies have been observed, with some reviews (e.g. Chubon, 1982; Yuker & Block, 1986) and recent research pointing in the opposite direction. In a review of the research regarding professionals' attitudes towards disability, Chubon's (1982) results revealed that there is little, if any relationship between their attitudes and age, sex, educational level and experience, while Pruett & Chan (2006), for instance, found that demographic variables had a greater predictive value for explicit attitudes, but not for implicit attitudes.

In what concerns sex, it was frequently found that women hold more positive attitudes towards PWD than men; however, as Yuker and Block (1986) note, this difference seems to be diminishing throughout time, perhaps mirroring social changes in the path towards a more equal status between women and men (Chan et al., 2009). Moreover, some research suggests that cultural differences regarding gender attitudes regarding PWD may be a relevant factor, as an inverse attitudinal pattern was found in some countries (i.e. men held more positive attitudes towards PWD), while in others, no gender differences were observed (Yuker & Block, 1986). On the other hand, a recent investigation suggests that gender differences might be influenced by the type of context of investigated attitudes; in this sense, women expressed more favourable attitudes than men regarding dating and marriage with PWD (Chen, Brodwin, Cardoso, & Chan, 2002). In what concerns gender and its relation to implicit attitudes, data gathered by Nosek, Smyth, Hansen, Devos, Lindner, Ranganath, Smith, Olson, Chugh, Greenwald, and Banaji (2007b) revealed that generally, men demonstrate stronger implicit preferences than women, and this difference was especially evident regarding implicit disability attitudes, with women showing strong preferences towards abled, and men an even stronger preference for this group, although other recent research has not find this pattern (Thomas, Vaughn, & Doyle, 2007; Wilson & Scior, 2015; White, Gordon, & Jackson, 2006). Nevertheless, in a recent review by Wilson and Scior (2014) concerning the measurement of attitudes towards individuals with disabilities with the IAT, authors suggest that sampling problems might contribute to these latter results.

In what concerns age, Nosek and collaborators (2007) state that, generally, literature has not tested the variation in social group attitudes by age group, while theory has not paid much attention to this possibility. Still, in an explicit level, literature has revealed that more positive attitudes have been associated with young children and adults than among adolescents and older adults (Chan et al., 2009), although this is not consensual, as some authors have contained that age is not an important variable, as it can reflect the influence of education and (lack of) contact, that gets diluted with time (Yuker, 1994; Yuker & Block, 1986). Conversely, as to what concerns age and implicit attitudes, older adults have shown stronger negativity towards disabled persons than younger adults did, what authors also hypothesise may be related to age-related declines in general processing speed and inhibitory ability of automatic activation of attitudes, which are important for IAT performance (Nosek et al., 2007b).

Regarding race and ethnicity, Black Americans, in an explicit level, have shown to stigmatize persons with disabilities less than do White Americans (e.g. Hebl & Heatherton, 1998; cited by Nosek et al., 2007b), while Asian students demonstrate less favourable attitudes towards this group than members of other racial groups (Saetermore et al., 2001; cited by Nosek et al., 2007b). However, as Nosek and collaborators' (2007b) study shows, the inverse situation is found regarding implicit attitudes. Yuker (1994) also stated that nationality is a more important correlate of attitudes towards PWD than professional training.

In what concerns the relationship between education, socioeconomic status, research has also showed a positive relationship between these variables and more positive attitudes towards PWD (e.g. Chan et al., 2009; Wilson & Scior, 2015). However, as previously stated, there are conflicting results regarding these variables (Chubon, 1982; Yuker, 1994), mainly in what concerns number of years of education and the generally associated variable of socioeconomic status (Yuker, 1994). In an implicit level, several studies show no relationship between these variables and implicit prejudice (e.g. Pruett & Chan, 2006; Wilson & Scior, 2015); the work undertaken by Nosek and collaborators (2007b) does not analyse such demographics.

We will now focus on direct contact with PWD, as it revealed to be one of the most important moderating factors influencing both explicit and implicit attitudes towards this minority group.

1.3.2. The importance of intergroup contact as a correlate of implicit and explicit prejudice towards persons with disabilities

Intergroup contact has been a recurrent theme of investigation since the early days of social psychology as a field in the first half of the 20th century (Pettigrew, Tropp, Wagner, & Christ, 2011). Following, and building on earlier work on group relations by other authors, Gordon Allport's seminal work *The Nature of Prejudice* release in 1954, more firmly set the grounds for the contemporarily known intergroup contact theory through the presentation of the influential intergroup contact hypothesis, which guided research on the topic for the next fifty years (Pettygrew et al., 2011).

Given the advances and knowledge cumulated through decades of research supporting the "mere hypothesis" formulated by Allport it is now considered to have evolved into a full developed theory (Brown & Hewstone, 2005; Pettigrew, 1998). More recent and significant support contending the original claim stating that intergroup contact generally leads to a reduction in prejudice was established by Pettigrew and Tropp's (2006) meta-analysis regarding a wide variety of age groups, geographical areas, contact settings and target groups, including people with disabilities. Moreover, this meta-analysis also revealed the crucial conditions proposed by Allport - equal status of the groups in the situation, intergroup cooperation, common goals, and authority support - to be an interrelated set of facilitators or enhancers of that effect, rather than independent factors or essential requirements for prejudice reduction (e.g. Pettigrew and Tropp, 2006; Pettigrew et al., 2011). In fact, the reduction of prejudice was observed even in unstructured contacts (i.e. investigation was not designed to meet Allport's optimal conditions); more simply put, it can be stated that both the quantity (amount/frequency) and quality (e.g. equal status, common goals, or subjective ratings of overall perceived quality) of contact play an important role in the reduction of intergroup prejudice (Pettygrew & Tropp, 2005). Therefore, as Pettigrew (2008) concisely puts it, "intergroup contact improving intergroup attitudes, then, is a general phenomenon." (p. 188). In addition, Pettygrew and Tropp (2006) also stated that samples of participants who were given no choice whether to engage in intergroup contact yielded the largest mean effect sizes between contact and attitudes when compared to "some choice" or "full choice" conditions; this result adds evidence to the causational path contact-attitudes, as it is not possible that prior attitudes to be guiding contact - the possibility of choice would have allowed prejudiced participants to avoid intergroup contact (Brown & Hewstone, 2005; Pettigrew & Tropp, 2006).

Interestingly, this wide applicability also suggests these contact effects to be associated with basic affective processes of attitude and prejudice formation such as the "mere exposure" effect. In this sense, several papers reveal that increased liking resulting from exposure also to social targets can generalize and lead to enhanced liking of other related, although unknown, social targets. Furthermore, research has also proposed that uncertainty reduction is an important mechanism underlying this phenomenon (e.g. Pettigrew, 2008; Pettygrew & Tropp, 2006; Pettygrew et al., 2011). Something related to this is the suggestion of the importance of decreasing intergroup threat and anxiety as mediators in the reduction of prejudice from contact which stems from recent research (Pettigrew, 2008). In fact, a meta-analysis on the processes by which contact reduces prejudice (the *how* processes by opposition to the conditions linked to *when* such reductions occur), has focused in the three most investigated mediators of contact: (1) enhancing knowledge about the outgroup; (2) reducing anxiety associated to intergroup contact; and, (3) increasing empathy and perspective taking (Pettigrew & Tropp, 2008); this work revealed that although all three variables impact on prejudice leading to its reduction, increased knowledge appears to be the least strong, as it presented the smallest effect magnitude, and thus losing its key role as a mediator, as previously hypothesized by Allport (e.g. Pettygrew & Tropp, 2008; Pettigrew et al., 2011). In fact, several studies show a preponderance of mainly affect-based mediators as yielding stronger effects in the reduction of prejudice; in this sense, physiological measures indicate that positive experiences in intergroup contact mitigates anxiety while contacting with outgroup members, which is associated with a decline in prejudice (e.g. Page-Gould, Mendoza-Denton, & Tropp, 2008; cited by Pettigrew et al., 2011). Intergroup anxiety may stem from minimal prior contact with outgroup members, negative outgroup stereotypes, intergroup conflict, among other factors, and might also give way to negative attitudes (e.g. polarization of group judgements), and behaviour (e.g. contact avoidance) upon (especially first-time) encounters with outgroup members; these situations are often marked by uncertainty regarding adequate norms of behaviour, and might also be due to culturally socialized aversion towards the outgroup, and lead to a state of heightened arousal, which hinders deliberate processes from occurring, hence leading to narrowed cognitive and perceptual focus and, consequently, to an increased reliance on heuristically driven automatic processes (like stereotype activation; Brown & Hewstone, 2005); however, the negative affect triggered by anxiety may also transfer by simple association to the outgroup exemplars perceived as its causers (e.g. Bodenhausen, 1993; cited by Brown & Hewstone, 2005).

Moreover, intergroup contact also lessens negative emotions shown to act as mediators such as fear, anger and, especially, threat to the ingroup, which also is linked to lower levels of prejudice. In addition, intergroup contact can also foster positive ingroup emotions, which in turn also decrease prejudice (Pettigrew et al., 2011).

Something also important to refer to, is the importance of group/category saliency as a moderator between contact and attitudes. “Group saliency” was operationalized in many ways; nevertheless, “awareness of group membership” and “perceived typicality” of the outgroup member in the contact situation, have shown to be the most reliable. Hence, according to authors such as Brown and Hewstone (2005), people will only establish a connection between an outgroup member, and the outgroup as a whole, if they have some degree of consciousness regarding respective group memberships. Also, evidence shows that both quantity and quality of contact with members of an outgroup have stronger, more beneficial, and generalizable effects on intergroup attitudes when the outgroup “exemplar” is perceived as being a typical representative of the group and/or respective group memberships are salient in the situation. This is an important association fostering the generalization of prejudice reduction, provided that category saliency is present to a certain degree (Brown & Hewstone, 2005). In a recent investigation by Vezzali and Capozza (2011) regarding the test of group membership salience as a moderator of the effects of contact on emotions and in explicit and explicit attitudes towards people with disabilities, results revealed to be consistent with Brown and Hewstone’s predictions regarding the importance of category saliency in prejudice reduction: it was only when group membership was salient that the positive effects of contact on anxiety and empathy were generalized to the whole category of people with disabilities. Yet, group membership must not be too salient, as it may backfire and exacerbate negative effects such as higher anxiety or threat levels (Brown & Hewstone, 2005).

Direct cross-group friendship has also been found to be a very important factor related to prejudice reduction, and a promotor of more positive contact effects at other levels (e.g. Pettygrew & Tropp, 2006; Turner, Hewstone, Voci, Paolini, & Christ, 2007). In fact, friendship seems to comprise several of the optimal conditions as proposed originally by Allport: it generally encompasses cooperation and the pursuit of common goals and equal status contact over a prolonged period, and across many contexts. Friendship features also promote self-disclosure, which has also been found to be an important mediator of positive effects in intergroup contact (e.g. Brown & Hewstone, 2005; Pettigrew et al, 2001; Turner et al., 2007). In fact, research evidence of its importance is so patent that Pettygrew (1998) suggested its inclusion as a fifth condition for optimal contact in addition to those encompassed by the original contact hypothesis, especially because long-term intergroup contact based relationships would impact more significantly in the reduction of prejudice than initial interactions (Turner et al., 2007); this proposition is supported by subsequent research, showing that cross-group friendships are associated with more positive attitudes towards the outgroup, greater attitude strength and accessibility, while these relationships are significantly mediated by intergroup anxiety (e.g. Turner et al., 2007).

Brown and Hewstone (2005) also stress the low number of research on the study of the association between attitudes and contact regarding stigmatized groups such as people with disabilities, and that Pettigrew and Tropp's meta-analysis shows that, when compared to other target groups, the effects of contact on prejudice, although evident, tend to be weakest in the context of disability. This matter of affairs suggests that, on the one hand, much investigation is still needed regarding this target group and, on the other, that some factorial idiosyncrasies linked to the intergroup context(s) of disability must play an important moderator or mediational role in the causational path between contact and attitudes.

Nevertheless, several authors dedicated to the study of the attitudes towards people with disabilities - and notably Harold E. Yuker as one of the most prolific and recognized authors in this domain - also developed research regarding the association between prejudice and contact, which also led to the more mainstream conclusion that contact is an important variable influencing attitudes towards PWD as stressed by Yuker (1988, 1994) and other authors (e.g. Livneh, 1988, 2012), in a "pre-implicit social cognition revolution era". However, as their work is mainly akin to the major assumptions of the original formulations of the contact hypothesis and the intergroup contact theory, it maintains its value to the field.

Yuker (1988) states that the "attitudinal consequences of contact with disabled persons are mediated by the characteristics of the disabled person, the nondisabled person, and of the interaction" (p. 274). In this sense, data indicates that for contact to result in positive attitudes, persons with disabilities should be: **1)** competent in the areas that are valued by other elements in the contact situation; **2)** socially skilful and able to communicate successfully; and **3)** accepting of his or her disability and being open in what regards discussing it. Moreover, Yuker (1988, 1994) states that the demographic and disability features of PWD appear to be more important in initial contacts. In addition, given the available data, for positive attitudes towards PWD, people without disabilities should have **1)** similar demographic and personality characteristics to those of the disabled individuals with whom they interact; **2)** an equal status to that of the disabled person; and **3)** educational and occupational socialization that did not centre the negative beliefs or status differences mentioned before. Lastly, and also according to the perspectives regarding the Contact Hypothesis and its subsequent developments optimal conditions, these interactions should involve cooperation and reciprocity, be rewarding to both parties, foster opportunities to let them know each other as individuals and that it persists over time Yuker (1988, 1994). Importantly, this author also stresses that intergroup contacts focused in the disability, or in the negative features or behaviour of the outgroup member, frequently leads to negative attitudes, as is the case, for instance, of treatment or rehabilitation contexts (Yuker, 1988); in this sense the intergroup contact is dependent on the role assumed by PWD and PwD in the relationship – e.g. care-taking, teaching, working with – and is also influenced by factors such as the norms and attitudes of authority figures present in the situation (Yuker, 1988).

The burgeoning amount of data regarding the relationship between intergroup contact and the reduction of prejudice, as well as its further systematization by Pettigrew and Tropp (2006) refers mostly to research using direct or explicit measures (Vezzali & Giovannini, 2011); while the results obtained are of incontestable theoretical and methodological value, it is not possible to overlook this important literature caveat that, to our knowledge, remains uncovered; a recent review on the measurement of implicit attitudes towards PWD using the IAT refer to only a few papers that measured the relationship between contact and implicit outcomes from that indirect instrument (Wilson & Scior, 2014). In their paper proposing an integrative theory of intergroup contact, which also includes a review on the research on the relationship of contact and several outcome variables, Brown and Hewstone (2005) refer to two studies adding an implicit measure of attitudes to the explicit measures that had been used in all the previous investigations; results indicate a direct, unmediated, effect of contact on implicit measures which suggest that the mere exposure effect has an impact at an implicit level (e.g. Karpinski & Hilton, 2001; cited by, Brown & Hewstone, 2005). Nevertheless, authors state that nothing was yet known regarding the existence of any mediating variables.

More recent research using contact as a predictor variable of implicit prejudice also reveals that regular and collaborative contact is directly linked to more positive implicit attitudes (e.g. Hewstone & Swart, 2011). Importantly, this was observed also in what concerns people with disabilities as a target group in studies using both explicit and implicit measures of attitudes towards this group whether in laboratorial settings with student samples (e.g. Pruett & Chan, 2006), whether in “real- context” field studies (e.g. Vezzali & Capozza, 2011; Vezzali, & Giovannini, 2011). However, no consensus exists regarding the contact dimension that is more relevant to attitude change, and results are rather mixed: several studies revealed that the amount of contact predicted lower levels of negative implicit intergroup attitudes (e.g. Tam, Hewstone, Harwood, Voci, & Kenworthy, 2006; cited by Vezzali & Capozza, 2011), as also Pruett and Chan (2006) observed regarding people with disabilities as a target group, whereas others found contact quality to be more relevant in the reduction of implicit prejudice (e.g. Vezzali & Giovannini, 2011). Moreover, evidence also supports the importance of both quantity and quality of contact in the reduction of implicit prejudice, namely an interaction between both dimensions of contact, as Vezzali & Capozza’s (2011) results show regarding implicit prejudice towards people with disabilities, which is also consistent with dual-process models of attitudes, whose basic assumptions will be explored below. The importance of both quantity and quality of contact is also frequently observed regarding explicit prejudice as it has already been stated above. However, in a study by Hein, Grumm, and Fingerle (2011), results showed that neither quantity, nor quality of contact predicted implicit prejudice towards people with disabilities. Also, Wilson and Scior’s (2015) prediction regarding the variation of implicit attitudes according to contact frequency was not supported by data analysis; nevertheless, an interesting pattern emerged: as contact increases, implicit attitudes become more positive up to the point of daily contact, where they become more negative, converging with the attitudes hold by participants with no or infrequent contact. Given this panorama, further investigation is necessary in order to shed some light underlying the relationship between contact and implicit prejudice.

Nevertheless, given the undeniable and empirically sustained importance of intergroup contact in the reduction of intergroup prejudice, we must not overlook the fact that it can also yield negative effects, even if their report is much smaller than the opposite relationship in the literature, as the Pettygrew and Tropp's (2006) meta-analysis also shows. This stems from the fact that the original formulations of the contact hypothesis assumed that most contact situations did not reduce prejudice and, for this reason, their primary concern was to uncover the positive conditions that could potentialize positive intergroup outcomes, thus guiding subsequent research in this same direction (Pettigrew, 2008). As we have seen, there are several factors that hinder the positive effects of contact to occur – e.g. intergroup anxiety and threat in the realm of affective factors, as well as personality (as authoritarianism), social and situational (e.g. voluntary vs involuntary contacts) variables – however, the mechanisms by which they exert influence are the least understood in the present moment, and thus, further research on the topic should be devoted to them (Pettigrew, 2008; Pettigrew et al., 2011), as well as undertaking longitudinal studies in order to be able to more adequately extract causal relationships between the relevant variables at stake (Pettygrew & Tropp, 2006). In this sense, Pettygrew and Tropp (2006) conclude by saying that "For the future, multilevel models that consider both positive and negative factors in the contact situation, along with individual, structural, and normative antecedents of the contact, will greatly enhance researchers' understanding of the nature of intergroup contact effects.".

2. On the measurement of attitudes towards persons with disabilities

It has been stated by several authors that very little attention has been devoted to the study of prejudice, stereotyping and discrimination in what specifically concerns people with disabilities – and mainly persons with physical disabilities - which has remained as a relatively discrete stigmatized minority within mainstream social psychology as opposed to other traditionally stigmatized and discriminated groups with base on features such as race or gender, which have been part of this defining line of research for many years (Dovidio et al., 2011; Dunn, 2010; Nelson, 2006). In fact, the investigation *corpus* dedicated to this group is very significantly smaller. Dunn (2010) explicitly reinforces this state of affairs by affirming that "Regrettably, disability attitude research is rarely acknowledged by mainstream social psychology".

Nevertheless, in spite of a coherent set of demographic indicators, as well as sociological and psychological research pointing in the same direction, suggesting the existence and maintenance of psychological schemata and individual and group processes that foster disabled persons' consistent and endured discrimination and stigmatization, other relevant and reliable investigation data stemming from academia also contradicts this perspective, stating that negative attitudes have been less and less prevalent over the years, giving way to much more positive attitudes.

Since the beginning of attitude research in the broad field of Social Psychology, that the so-called ***direct measures***, or self-report, methods such as opinion surveys, rating scales, or interviews have been traditionally used (Payne & Gawronski, 2010) - including the literature *corpus* dedicated to the attitudes towards persons with disabilities - because it was assumed that it was possible to measure attitudes through individuals' beliefs, opinions and evaluations regarding a certain object of interest (Lima & Correia, 2013), thus implying their conscious knowledge. As such, the contradictory observations cited above, may be justified, at least partially, by the extensive use of these instruments, which may more probably elicit respondent reactivity, as he or she can more easily become aware it intends to capture private attitudes, opinions or values, what potentially leads to the deliberate regulation of its expression through attempts to modify or distort them in various ways while responding (e.g. Antonak & Livneh, 2000; Lima & Correia, 2013; Wilson & Scior, 2014). Although several ways to minimize these and other effects related to the responding subject exist, the possibility of strategic response is enhanced when the attitudinal object is sensitive, and the expression of blatant, explicit negative attitudes in relation to it is socially sanctioned – as it is the case of people with disabilities (e.g. Chan et al., 2009; Dovidio, Hebl & Pagotto, 2011); these methods are then particularly sensitive to the influence of several participant-originated bias (of which social desirability effect is considered an important example), thus calling into question their validity.

Hence, the apparent decline in overt expressions of prejudice against several stigmatized groups, thus suggesting improvement in attitudes towards disability (e.g. National Disability Authority [NDA], 2007), and other social groups, gave rise to more subtle forms of discrimination (e.g. Dovidio, Pagotto, & Hebl, 2011)., Following De Houwer and collaborators (e.g. De Houwer & Moors, 2010) conceptual taxonomy of these measurement procedures' features and the psychological attributes that they intend to measure, the outcome variables associated with indirect measures of attitudes are designated by ***explicit attitudes***

Hence, in an effort to obviate such detrimental effects of direct measuring, several ***indirect methods*** were developed, from which attitudes are inferred from an alternative indicator that is not a verbal response to a direct question on a held attitude (Lima & Correia, 2013); these methods assume that an apparently objective and straightforward task reveals latent and unconscious psychosocial constructs that are thus interpreted as attitude (Antonak & Livneh, 2000). These measures can be classified into four categories: **1)** *unobtrusive behavioural observations* (the respondents are unaware that they are being observed or measured); **2)** *projective techniques* (respondents are aware that they are being observed or measured, but do not know what the true purpose of the measurement is); **3)** *disguised techniques* (respondents are purposefully deceived regarding the real objectives of the measurement situation); and, **4)** *physiological methods* (the respondents are aware of being measured but are inactive participants in the measurement process; Antonak & Livneh, 2000). However, some indirect measures did not succeed in delivering more adequate validity or reliability, mainly projective techniques. Still, technological progress made it possible to use computerized methods through which stimuli were presented and response times were accurately recorded; these are known as "response time measures" (e.g. Teige-Mocigemba, Klauer, & Sherman, 2010). Following again the referenced taxonomy presented by Jan De Houwer and collaborators, these indirect methods of attitudes are considered to measure ***implicit attitudes***.

Nevertheless, issues regarding some of these methods have been pointed out by several authors, namely the weak correlations between different implicit measures of attitudes conceived to assess the same construct, which is argued to arise from low reliability (e.g. Fazio & Olson, 2003; Lane, Banaji, Nosek, & Greenwald, 2007; Hahn & Gawronski, *in press*); furthermore, suggestions have been made implying that those weak associations might reflect the heterogeneity of the cognitive processes involved, which are thus captured by different information-processing mechanisms underlying those methods (e.g. Fazio & Olson, 2003; Gawronski & Bodenhausen, 2007).

As to what concerns the investigation on attitudes towards persons with disabilities, the vast majority of the instruments used are also direct in nature, although, in the last years, following the advent of implicit social cognition and its methods, namely indirect measures of attitudes, this type of instruments has been being introduced in research regarding implicit attitudes and its comparison to explicit attitudes towards this group. Several of these implicit instruments were used to tap into implicit constructs such as attitudes or stereotypes towards people with disabilities, and include evaluative priming tasks (e.g. Hornstra, Denessen, Bakker, van de Bergh, & Voeten, 2010), error choice methods (e.g. Clarke & Crewe, 2000), and prototypes (e.g. McCaughey & Strohmer, 2005).

Nevertheless, there still are not many studies using indirect measures to investigate implicit attitudes towards persons with disabilities, and many of those that make use of them, have administered them to small and/or convenience samples (e.g. Thomas, Vaughn, Doyle, & Bubb, 2014; Wilson & Scior, 2014), a very common criticism that is not even new. Investigations using these indirect methods have typically found more negative attitudes than their direct counterparts, especially in what concerns prejudices towards traditionally stigmatized groups such as women, and ethnical or racial groups. The same pattern was also observed regarding persons with disabilities as a minority group (e.g. Wilson & Scior, 2014).

Moreover, previous research based in direct methods has already showed that not even those who expectedly should hold more positive attitudes towards persons with disabilities express negative attitudes towards this group. In fact, negative explicit and implicit societal attitudes towards people with disabilities have been empirically sustained through the last decades and are now very well documented in the literature. Even professionals who work with this group, as well as students from several academic domains who predictably will engage in frequent direct contact with this population, express negative implicit and/or explicit attitudes towards people with disabilities, with potentially serious consequences in what concerns intervention (e.g. Chubon, 1982; Gething, LaCour, & Wheeler, 1994; Pruett, & Chan, 2006; Robey, Beckley, & Kirschner, 2006; Wilson & Scior, 2014); some studies even indicate that those may even aggravate as professional education progresses (Brillhart et al., 1990; cited by French, 1996). Nevertheless, it has not been observed a consistent pattern: in some studies, their level of negative bias did not differ significantly from that of the general population (French, 1996; Cook, 1998; cited by Chan, et al., 2009), or from other professionals or students from domains with (expected) less frequent contact with people with disabilities negative attitudes (e.g. Lyons, 1991). In contrast, other authors found the reverse situation, with those students or professionals working directly with this minority group exhibiting more positive explicit and/or implicit attitudes than students or professionals from other academic backgrounds (e.g. Chan, Lee, Yuen,

& Chan, 2002), or those from the general population (French, 1996). Such state of affairs is especially relevant because these negative attitudes may have very a profound and detrimental impact in people's with disabilities lives, as professionals, and especially health and rehabilitation professionals, are gatekeepers of both information and services destined to this population –life experiences, opportunities, and help-seeking behaviour (p. e. Chan, et al., 2009; Kaplan, 1982; citado por Pruett & Chan, 2006); additionally some investigations yielded inconsistent results regarding comparisons between professionals' and general population's attitudes towards persons with disabilities; some verified that professionals' attitudes and general population's attitudes were not significantly different, while other found the inverse pattern (Chan et al., 2009).

How to explain this apparent ambivalence then? The contention that implicit measures provide information that cannot be acquired by explicit instruments is founded in the very frequently observed tendency of a weak to no correlation between both types of measures, even though several exceptions can be found (e.g. Hahn & Gawronski, *in press*; Hoffman et al., 2005; Payne & Gawronski, 2010). This argument has greatly influenced research on the relationship between implicit and explicit measures by fuelling profuse theoretical, empirical, and methodological production and a subsequent, and ongoing, debate. In this sense, single and dual process models of attitudes are especially important as different views regarding underlying mechanisms of information processing and of behaviour prediction, as well as the investigation on moderator variables influencing implicit and explicit (in)consistency (e.g. Hahn & Gawronski, *in press;* Payne & Gawronski, 2010;), which according to Hoffman and collaborators (2005), can be included in five general factors: (1) translation between implicit and explicit representations (e.g. representational strength or dimensionality); (2) information integration for explicit representations (e.g. factors influencing spontaneity and deliberation or cognitive dissonance) and ; (3) factors influencing explicit (e.g. motivation to control prejudice) and (4) implicit assessment (e.g. situational context or reliability) ; and, (5) features of research design and sampling (e.g. order of implicit-explicit measurement) .

Regarding ambivalent attitudes, Livneh (1988) clearly defined persons with disabilities to be "objects of ambivalence", eliciting both, positive and negative feelings. In addition, Dovidio and collaborators (2011), stressed that the non-mutually exclusive nature of positive explicit and negative implicit attitudes must be acknowledged. Implicit social cognition has conceptually explained this duality recurring to "dual process models of attitudes". Models encompassing this perspective state that implicit and explicit attitudes probably share a developmental origin as outcomes of similar experiences and learning history, but establish a distinction between processes tendentially efficient, automatic and operating under consciousness and dependent on associative processes (taped by implicit measures), and more conscious and deliberate processes yielded by higher cognitive processes (captured by explicit measures). One of the most important factors influencing the relationship between explicit and implicit measures is the attitude objects' normative context. It is by means of socialization within a specific cultural and historical context that people may acquire negative attitudes; when later norms change or one experiences contexts characterized by normative prescriptions dictating that one should not hold such negative attitudes towards these groups, people will adopt explicit unbiased attitudes (while implicit, unconscious, attitudes remain stored in memory; Baron &

Banaji, 2006; Dovidio et al, 2011)). Implicit attitudes have generally been considered much more difficult to change given their origins based in overlearning and habits, which make them more accessible than explicit, newer attitudes, that demand much greater efforts in retrieving the associated information stored in memory (e.g. Dovidio et al., 2011). Nevertheless, more recent developments have shown that implicit measures are very malleable and permeable to context influences (Hahn & Gawronski, *in press*). In addition, research suggests that a bigger correspondence between the two types of measures is expected when the social object they refer to is not socially sensitive, than when the contrary is observed, or when it is linked to norms inconsistent with historical norms or traditional socialization (e.g. Dovidio et al., 2011; Hahn & Gawronski, *in press*). Something related to this is the suggestion that these explicit attitudes may reflect more the shifts in cultural, social or political norms towards a more egalitarian society than an effective attitude change in an individual level that would maintain negative representations (Deal, 2007).

The dual processes explanation then consistently accommodates the ambivalent results yielded by direct and indirect measures towards stigmatized groups. Moreover, in what concerns implicit attitudes towards persons with disabilities, these suggest significant bias against this group, while explicit attitudes show little evidence of prejudice, as observed in racial prejudice. It is not surprising then, that even professionals who work with persons with disabilities also demonstrate this dichotomy between implicit and explicit attitudes.

In what concerns behaviour, its relationship with attitudes is mediated by the beliefs, context, perceived social norms, motivation to comply with the norms, as well as by the specificities of both attitudes and behaviours. While basing in dual processes accounts, several authors have suggested that implicit and explicit attitudes may influence and predict different types of behaviour towards elements of the stigmatized group, while also depending from certain conditions (e.g. Hahn & Gawronski, *in press*). In this sense, the “aversive racism” model is consistent with dual process frameworks and constitutes an integrative theoretical framework that was built on Katz’s conceptualization of “ambivalent” attitudes (Dovidio et al, 2011); although it was originally formulated regarding racism, its assumptions can be transposed to the context of prejudice and discrimination against persons with disabilities. Moreover, Deal (2007) has even renamed the original designation of Gaertner and Dovidio’s theory to better express this theory’s assumptions when applied to disabled groups: “aversive disablism”. Those authors’ original assumptions state that modern racism operates frequently unconsciously, in subtle and indirect ways, in an opposite fashion from traditional racism, which is blatant and direct. More specifically, Gaertner and Dovidio (1986; cited by Dovidio et al., 2011) explained that: “In our view, aversive racism represents a particular type of ambivalence in which the conflict is between feelings and beliefs associated with a sincerely egalitarian value system and unacknowledged negative feelings and beliefs about Blacks… Aversive racists’ inability to acknowledge their negative feelings… together with their sympathetic feelings towards victims of injustice convince them that their racial attitudes are largely positive.”. Aversive racism will then operate in such ways that people may appear unprejudiced in their overt explicit behaviour, because of their egalitarian beliefs, but will discriminate against Blacks in subtle ways when their behaviour can be justified in any other variable but race, while maintaining a positive self-image. These basic principles may also apply to the prejudice and stigma towards persons with disabilities, and will reveal mainly on indirect measures or in formal or informal situations where discrimination can be justified on some other basis than their personal bias (e.g. lack of perceived fit regarding competences necessary for accomplishing job responsibilities; Deal, 2007; Dovidio et al., 2011). This may also be applied to contact avoidance, based in justifications that do not acknowledge discrimination based in group membership. Also, people without disabilities show greater bias in the form of anxiety, hostility and avoidance towards persons with disabilities in more intimate interpersonal situations (Berry & Meyer, 1995; cited by Dovidio et al., 2011).

Hence, modern prejudice against persons with disabilities is also often unintentional, unrecognized, and personally denied (e.g. Deal, 2007).

3. The present investigation objectives and hypothesis

As already stated, research on both implicit and explicit attitudes of professionals working daily with people with disabilities towards this population is still scarce. Moreover, the importance of direct intergroup contact as a correlate of explicit attitudes as defined by intergroup contact theory (e.g. Brown & Hewstone, 2005) and its early formulation as intergroup contact hypothesis (e.g. Allport, 1954; cited by Pettygrew & Tropp, 2006) is now very well established, also in what concerns PWD; the relationship between direct contact and implicit measures is still not well known (Vezzali & Cappoza, 2011). Nevertheless, its consistent and standardized evaluation alongside with explicit and implicit prejudice is equally rare, also regarding professionals working with PWD, at least, to our knowledge.

Therefore, considering the previous literature review, the objectives we intend to accomplish through the development of the present work are:

1. To explore explicit and implicit attitudes/prejudice of professionals working daily with PWD towards this group;
2. To investigate the relationship between the explicit and implicit attitudes/prejudice of professionals working daily with PWD regarding this group;
3. To examine the relationship between the amount of perceived direct intergroup contact and the implicit and explicit attitudes/prejudice of a professional population towards individuals from this group;
4. To explore the relationship between perceived quality of direct intergroup contact and the implicit and explicit attitudes/prejudice towards PWD of a professional population with daily contact with individuals from this group;

5. To investigate the relationship between a standardized measure of intergroup contact and the implicit and explicit attitudes/prejudice of professionals working everyday with this group towards it.

Given that research has consistently shown that: **(1)** explicit attitudes are generally more positive than implicit attitudes (e.g. Wilson & Scior, 2014); and, **(2)** explicit and implicit attitudes are weakly correlated, thus giving rise to explanations mainly based on dual processes of attitudes, stating those as independent and yet related constructs in memory, we hypothesise that:

H1: The explicit measure mean score will be more positive than the implicit measure mean score.

H2: Explicit and implicit measures of attitudes will be weakly correlated.

In what concerns direct contact with PWD, as recent research, reviews and meta-analysis have shown that: **1)** contact by itself is associated with reductions in explicit and implicit prejudice towards PWD (e.g. Pruett & Chan, 2006); **2)** that higher levels of quantity and quality of direct contact are associated with more positive explicit attitudes (Pettigrew & Tropp, 2006); and, **3)** the effects of both quantity and quality of contact in implicit attitudes have been found to be rather mixed, although theoretically it makes sense to expect both to reduce implicit prejudice, as it is also coherent with a dual process of attitudes perspective (Vezzali & Capozza, 2011), we hypothesise that**:**

H3: Higher mean levels of contact as measured by a standardized measure will be associated to more positive explicit attitudes;

H4: Higher mean levels of contact as measured by a standardized measure will be associated to more positive implicit attitudes;

H5: Higher mean levels of perceived quantity of contact are associated with more positive explicit attitudes;

H6: Higher mean levels of perceived quality of contact are associated with more positive explicit attitudes;

H7: Higher mean levels of perceived quantity of contact will be associated with more positive implicit attitudes.

H8: Higher mean levels of perceived quality of contact will be associated with more positive implicit attitudes.

Second Part – Empirical Studies

This Second Part is divided into two chapters. In Chapter III the pilot study which represents the preliminary efforts carried out to adapt the Disability Attitude IAT computerized measure is presented. Chapter IV describes the main study, respective results, discussion and conclusions and presents the actual exploration of our specific objectives.

Chapter III

Figuring in and figuring out the best (possible) IAT target categories and stimuli: Defining target categories labels and pictograms as target category exemplars

"(…) disability is only one aspect, and often a very minor aspect, of a person. We should always attend primarily to the person."

Harold E. Yuker (1988, p. xiv)

1. Pilot Study: Development of a Disability Attitudes Implicit Associations Test

Mirroring its importance and influence in implicit social cognition dominant research on gender and race attitudes, the IAT also became the most popular indirect instrument in the investigation of attitudes or stereotypes towards people with disabilities as a general supraordinate category (e.g. Pruett & Chan, 2006; Thomas, Doyle, & Vaughn, 2007), or specific disability groups (e.g. Enea-Drapeau, Carlier, & Huguet, 2012).

The IAT is one of the most influential and widely used indirect time-based computerized measure aimed at estimating the relative strength of (unconscious) automatic associations (i.e. attitudes, stereotypes,…) between four concepts: two target-group categories and two attribute categories (e.g. Lane et al., 2007). It involves a sorting task of stimulus exemplars pertaining to each of those concepts using only two response options, each of which is assigned to two of the four categories; the basic idea underlying this instruments' task is that it should be easier (i.e. faster) to perform when the target category and the attribute are strongly associated, than when they are not (e.g. Greenwald, McGhee, & Schwartz, 1998; Lane et al., 2007; Nosek, Greenwald, & Banaji, 2007a). It was first published by Greenwald et al. (1998), after its creation in 1994 and a few years of developing and studying this technique. In addition to the implicit social cognition's general objective of creating a robust measure regarding the social desirability effect, its authors also aimed at creating a (much necessary) indirect tool, sensitive, methodologically, procedurally and statistically powerful enough to capture individual differences among a population (Greenwald, & Banaji, 1995; Lane, Banaji, Nosek, & Greenwald, 2007; Banaji & Greenwald, 2013).

Several versions of it have been developed through the last years, using different category labels to refer to the attitude object, as well as distinct types of target category exemplars (pictures, pictograms or words). Nevertheless, research investigating implicit attitudes regarding people with disabilities are still only a few, and recent research, including a review (Thomas, Vaughn, Doyle, & Bubb, 2014; Wilson & Scior, 2014), have suggested that several methodological problems regarding the IAT. However, in order to allow for comparability between the results obtained in the present work and previous studies using the IAT, this was also the chosen implicit measure to evaluate participants' implicit attitudes towards persons with disabilities.

Next several methodological important steps in the development of an ecologically sound Disability Attitude – IAT will be presented.

1.1. Figuring out the best (possible) IAT superordinate target-category labels

For the development of this instrument and subsequent investigation, first it was fundamental to operationally define adequately the central target concept - "persons with disabilities" (*Pessoas com Incapacidades* in Portuguese original): the minority group, or attitudinal object, of interest [and, by extension its obvious "counterpart", "Persons without Disabilities" ("*Pessoas sem Incapacidades* in the original version)]. In this sense, literature states that the construal of the superordinate nominal categories according to which stimuli have to be categorized is determinant to how they are appraised, as they define the context of the evaluative judgement, and thus significantly impact IAT effects; hence, the precise definition of the constructs of interest and respective labels is critical (Lane et al., 2007; Teige-Mocigemba, Klauer, & Sherman, 2010). In the present work, although the comparison category is somewhat obvious, some conditions must be met regarding both categories, namely, they must be sensible and mutually exclusive and, ideally, from the same domain, or, in what concerns the counterpart category, it should represent the absent domain in the target category, as is the case in this investigation (Lane et al., 2007).

Although this is apparently a very straightforward task, it presents some challenges in order to adequately avoid reliability and validity issues. On the one hand, it is theoretically, methodologically and procedurally important that the target construct and respective label refer to persons who present a permanent impairment with significant and permanent limitations in activity, as well as restrictions in participation in any life domain[3], and in the other, a necessary condition for promoting this: that this target

---

[3] These features were considered of major relevance since literature regarding the origins of negative attitudes toward people with disabilities shows its prognostic to be an important factor influencing attitude formation toward this group (e.g. Livneh, 1988, 2012). Persons with permanent (impairments and) disabilities are targets of more negative attitudes (e.g. multi-disabilities) and are expectedly more consistently exposed to experiences of discrimination.

concept (as well as its counterpart) encountered some echo in the Portuguese society terminology span regarding disability (a concept that is still frequently overlapped conceptually with “impairment”[4]). At the same time, some degree of overlay with the literature of reference is desirable, including the prevailing anglo-saxonic expression; nevertheless, it is very difficult (if even possible) to find perfectly equivalent concepts when translating.

In line with the previous literature review, it was intended to use a conceptual and operational definition more in line with the biopsychosocial model, as previously presented and defined by WHO for mainly two reasons: **1)** terminologies such as “Impaired” (“Deficientes”) versus “Non-impaired” (“Não-deficientes”) or “Persons with/without Impairments” (“Pessoas com/sem Deficiência”) are bound to the traditional medical model and currently considered obsolete; and, **2)** the sample would desirably comprise mostly professionals working with people with disabilities, and many are familiar in several degrees with the ICF framework, and hence more traditional labels such as the latter could be regarded either as an incorrection, a personal endorsement of the medical model, or both. Nevertheless, using the Portuguese translation for “disability” or “persons with disabilities” (in a biopsychosocial background; *Pessoas com Incapacidades*) would probably lead to doubts regarding what this terminology might signify, since “disability”, as an umbrella concept, is very broadly defined, and the perspective regarding the role of the “impairment” is very different from its definition in other models, such as the medical model, which is still very influential in some domains. Furthermore, for ecological soundness reasons, it was important not to lose sight of cultural influences in the Portuguese society in the more common designations regarding this minority group and to which all citizens are exposed to, and, to some extension, influenced by, independently of their personal and professional background.

In the face of the exposed difficulties, the chosen “label” to represent the group of interest was “Persons **With** Impairments and Disabilities” [P**W**ID, *Pessoas com Deficiências e Incapacidades*, versus “Persons without Impairments and Disabilities” (PwID), *Pessoas sem Deficiências e Incapacidades*], as operationally defined in CRPG and ISCTE’s (2007c) study (pp. 45-49). These authors based and justified it upon the analysis of several Portuguese official documents regarding definitions of “impairment” and “rehabilitation”. While keeping a contentious nature, it seemed the more adequate to the development of the present investigation:

> “A person with significant activity limitations and participation, in one or several domains of life, following from the interaction between the functional and structural changes of permanent nature and the surrounding contexts, resulting in prolonged difficulties of communication, learning, mobility, autonomy, interpersonal relations and social participation, leading to the mobilisation of services and resources, in order to promote the potential for bio-psychosocial functioning.” (CRPG & ISCTE, 2007c; p. 45).

---

[4] “Disability” is frequently translated for “deficiência”; and not even WHO escapes this: in the official Portuguese (Brazilian Portuguese) version of the “World Report on Disability” a WHO and World Bank official publication, “disability” was translated for “deficiência”.

This operational definition aims at achieving an equilibrium between the legacy of the medical and social models and the bio-psychosocial framework; at the same time, it seems the more reasonable to adopt in what concerns the Portuguese society medical legacy regarding terminology use (CRPG & ISCTE, 2007c; please refer to the Appendix A, for CRPG and ISCTE's (2007c) analysis of the operational dimensions regarding the chosen conceptual label).

1.2. Figuring in and figuring out the best (possible) IAT: Pictograms as target-category exemplars

Category stimulus exemplars also significantly influence IAT effects (Lane et al., 2007). In fact, among other features, it has been stated in the literature that the use of words as stimuli representing the target categories yields bigger IAT effects than when stimuli exemplars are images (e.g. Foroni & Bel-Bahar, 2009; Nosek, Banaji, & Greenwald, 2002). Furthermore, the use of pictures as stimuli raises additional difficulties as it requires the control of variables such as gender, age, physical attractiveness, which may introduce unwanted variance in the results if neglected (e.g. Nosek, Greenwald, & Banaji, 2007a). Word stimuli also provide challenges regarding adequate selection if confounding effects like recoding are to be avoided; it is fundamental to adequately select representative stimuli of each category while accounting for features such as the number of letters of stimuli words, or the letter by which each word starts, as well as their valence (in what concerns target categories), which must be balanced between opposing categories (Lane et al., 2007; Teige-Mocigemba et al., 2010). The main objective is to obtain high-quality exemplars, those that best capture the constructs of interest. Yet, these challenges are expectedly somewhat simpler to overcome, when compared to pictures.

Hence, it was first decided to use word stimuli exemplars. Also, as it was important to gather ecologically sound stimuli in what refers to the Portuguese population, a pilot study *(in prep)* was conducted to collect words associated to the target categories defined: "Persons With Impairments and Disabilities (P**W**ID)" and "Persons without Impairments and Disabilities" (PwID). The preliminary results revealed that almost all of the words automatically elicited by the P**W**ID category were undoubtedly negative in its valence, and/or did not undoubtedly pertain to one, and only one, of the target or attribute categories' labels; it was also observed some eventual overlap between target and attribute categories (please see Appendix B for the lists of words obtained for each superordinate target category). Given that the characteristics that an IAT must attain to be reliable and valid are primarily based in the selection of the appropriate superordinate target category labels and stimuli, and since that even before a fully developed pre-test evaluation, the collected words evidently lacked in adequacy as exemplars, it was decided that the use of pictures as exemplars representing each target category would perhaps be more suitable, as the initial assessments of that first pilot study revealed those important limitations, and ultimately, impediments to the development of a sound and robust measure.

To our knowledge and in what concerns the use of pictorial IAT's to evaluate automatic preferences regarding the general superordinate target categories of "abled"/"disabled" or "disability"[5] (the anglo-saxonic versions of the Portuguese chosen labels), pictograms (whether or not literally resembling a traffic sign) have been the type of picture elected to represent the target categories exemplars (e.g. Pruett & Chan, 2006; Nosek et al., 2007b). As with verbal stimuli, each of the exemplars must meet certain criteria already established by years of research and that have been systematized in several reviews; neglecting such guidelines may severely bias results and their interpretation (e.g. Lane et al., 2007). Besides the need to meet these general criteria, it is also important that each set of stimuli is coherent in itself, and hence also concurring to the internal consistency of the instrument, as to its reliability and validity in general. These prerequisites are not easy to accomplish, even before pretesting (e.g. Nosek, et al., 2007a).

The first Disability Attitude IAT ever conceived was developed and ran by the Project Implicit (PI) team, and was administered through the project's web site; the results gathered between 2003 and 2006 were analysed and published in 2007, along with other 16 IAT tasks results (Nosek, Smyth, Hansen, Devos, Lindner, Ratliff, Smith, Olson, Chugh, Greenwald, & Banaji, 2007b). This first Disability Attitudes IAT used pictograms as category exemplars, and are available at the project's web page (at https://www.projectimplicit.net/stimuli.html). Pruett and Chan (2006) used the same pictures in the development of a paper-and-pencil version of Project Implicit's Disability IAT. The PI team's paper where the above referred results analysis were published, is also indicated as the adequate reference for the respective stimulus materials (Nosek et al, 2007b); nevertheless, it does not explain the methodology behind their selection, thus creating a fertile ground for assumptions of arbitrariness regarding their selection, while eventually unfair; this is a generalized criticism that was also pointed in a recent literature review regarding the use of IAT to measure implicit attitudes towards persons with disabilities (Wilson & Scior, 2014).

In the face of the preliminary results mentioned in the past section, and after a critical analysis of the IAT tasks used by PI's team (Nosek et al, 2007b) and Pruett and Chan (2006), regarding their respective stimuli [please refer to Appendixes C and D for the original DA-IAT pictorial stimulus used by Nosek and collaborators (2007b), and by Pruett and Chan (2006) in their paper-and-pencil version and their critical analysis, respectively), structures and procedures, it was developed a second pilot study, whose main objective was to collect both ecologically, culturally and conceptually adequate pictorial stimuli.

In order to avoid the categorization of stimulus based on any irrelevant characteristics from the point of view of both the theoretical conceptualization and the experimental paradigm regarding IAT's structural and process levels, and thereby preventing these features to contribute in any way to the introduction of undesirable variance in the outcome variable (due to recoding processes, for example), the cited critical analysis of the original abled-disabled IAT yielded some guidelines that were actively pursued when

---

[5] Several studies use Picture-IAT versions, using full-size or cropped photographs or pictograms to suit the authors' conceptual and design needs in the evaluation of the implicit attitudes or stereotypes toward very specific target categories within the general umbrella designations of (dis)ability or (dis)abled (e.g. Pruett & Chan, 2006; White, Jackson, & Gordon, 2006)

searching for new stimulus; some other features considered relevant were added. Hence, new target category exemplars were sought to: **1)** represent people following the same "standard humanoid appearance”: no necks, rounded arms and legs terminations, as well as rounded joints; **2)** have a proportional size when compared to all of the other exemplars irrespective of the category; **3)** black figures over white square background, with no delimiting lines; **4)** guarantee that all exemplars follow the same direction when suggesting movement (when relevant, and whether in relation to the pictograms in the category or in the counterpart target category); and, **5)** be in the same position in relation to the observer, also regardless of category membership.

The main objectives of this pilot-study were: **1)** to pre-select more adequate stimulus representing the intended superordinate categories; and, **2)** to pre-test the adequacy of the two pre-selected sets of stimulus pertaining to both of the target categories to be used in the DA-IAT, which is a central instrument in this thesis’ main study.

1.2.1. Method

1.2.1.1. Participants

Twenty-two individuals were recruited through e-mail and social media networks; however, only sixteen completed the questionnaire. This small sample included 12 women (75%) and 4 men (25%), and was mostly located in Lisbon (56%) and Setúbal (25%) districts; all of them were Portuguese.

Participants ranged in age from 21 to 59 years old, with a mean age of 36,63 years (SD=9,359) and held an undergraduation as minimum education; the majority completed a master’s degree course (pre-Bologna process implementation).

Most participants indicated they did not have a disability (n=12, or 75%), and in addition, the majority (n=11, or 69%) reported having at least one family member, and half at least one friend, with impairment(s) and disability(ies); only 3 (18,75%) reported having both.

Participation was voluntary, confidential and anonymous, and the participants did not receive any compensation for it. Furthermore, they could drop out at any time by closing the questionnaire window.

1.2.1.2. Materials: Pictorial stimuli sets

The pictograms used in this study were collected from several websites specialized in royalty free images for professional use (e.g. www.shutterstock.com, www.istockphoto.com), and were searched using keywords such as, “persons”, “people”, “disability”, “impairment”, “impaired” or “disabled”, both in

Portuguese and English. Vector-based pictograms were privileged upon other types of image files (such as, .jgp or .png) since they present several features that put them in a vantage point, especially the fact that they allow rescaling to larger or smaller sizes without losing quality, while the edges of each object within the graphic stay smooth and clean irrespective of the scale; hence its characteristics are better for the objectives pursued in these studies, while also helping in maintaining coherence in terms of all the exemplars appearance.

Items equivalent to the original were also searched, while trying to respect the general orientations stated above. However, its digital edition with specialized software was frequently necessary in order to respect those orientations. Also, some of the original stimuli were also included in the created stimuli pool, also after digital manipulation to respect those guidelines; for example, the two-figure original stimulus was manipulated in such a way that all the features relating both to gender or activity were suppressed; also, arms, legs and joints were worked on to resemble the other stimuli aesthetics. It was made an effort to find or create a counterpart exemplar for every stimulus in the pool. According to the guidelines stated before, several images were gathered, (re)created, and manipulated yielding a total of 20 pictograms (Appendix E), from which 13 were selected and hence composing the final two sets of target category exemplars. All pre-selected pictograms have been digitally edited through image processing software so that all presented the same dimensions, proportions and figure colour (black), and enclosure in an unlimited white squared background (8cm x 8cm).

1.2.1.3.Measures

To accomplish the established objectives, the evaluation of each image and other relevant variables was made possible and available to the participants through an online questionnaire administered through *Qualtrics* [please refer to Appendix F for a paper version of this instrument].

Each proposed stimulus was evaluated about its valence and degree of perceived suitability regarding membership to either of the categories named. Data related to other relevant variables were also collected; nevertheless, given that the sample is very small and that those were evaluated in the main study (e.g. direct contact with persons with impairments and disabilities) only the results regarding the pictograms will be reported.

A description of the questionnaire contents follows bellow.

A. Valence and level of association with the superordinate target-categories.

From the 20 pictograms in the pool, only 13 compounded the final set to be evaluated by the participants, as a more profound evaluation identified some eventual problems with some of them (e.g. level of complexity, apparent movement or velocity): 5 pictograms anticipated to be associated with the target-category “PwID”, and 8 expected to be associated with “P**W**ID””. The evaluation of each pictogram included three questions regarding its subjective association with both target categories as well as its perceived valence. The participants were first asked to evaluate to what extent people in the Portuguese society considered each of the displayed pictograms to be associated with the target categories, “Persons **W**ith Impairments and Disabilities” (“*Pessoas COM Deficiências e Incapacidades”*) and “Persons without Impairments and Disabilities” (“Pessoas sem Deficiências e Incapacidades”): *“To what extent do people of the Portuguese society associate the presented picture to the social category ‘People with/without disabilities’”*?”. The answers were given according to a Likert-type scale, ranging from 0 (“*Not at all.*”) to 7 (“*Completely.*”). The third question asked to evaluate the presented image regarding its valence: “*How do people from the Portuguese society evaluate the picture presented above*?”; participants answered using a Likert-type scale ranging between 0 (“*Completely negative*.”) and 7 (“*Completely positive*.”).

Each pictogram and respective three questions were presented in a single page, and the 13 pictures presentation was randomized to control for order effect. If the participant forgot to answer any question the program would inform about the number of unanswered questions and ask if he or she wanted to answer before proceeding.

B. Socio-demographical data

The demographic variables included in the questionnaire were: gender, date of birth, nationality, district of residence, educational level, current occupation and presence of personal impairment and/or disability, as well as a small description of the respondents’ situation if any impairment and/or disability was present.

1.2.1.4. Final questionnaire pre-test

After the construction of the final questionnaire, four persons were asked to pre-test it to evaluate if the questions were explicit enough easy to understand as formulated. This questionnaire’s pre-test version was also presented in the online survey research platform *Qualtrics*, as the final one would.

The participants in this pre-test and their respective socio-demographic features are listed in the **table 3.1.**, below.

Upon filling in the instrument, these participants were asked to indicate all the doubts that had eventually arisen while answering any of the questions, as well as to present any comments regarding the instrument in general or either of its components, and to refer to any functioning problems linked to the online administration of the instrument through *Qualtrics*.

Table 3.1. *Stimuli evaluation questionnaire pre-test – Participants' socio-demographic features.*

Gender	Age	Nationality	Education	Occupation	District of residence
Male	32	Portuguese	Secondary Level	Software Developer	Lisbon
Male	33	Portuguese	- Secondary Level; - University attendance.	Pharmaceutical Sales Representative	Faro
Female	37	Portuguese	Undergraduation*	Math Tutor	Lisbon
Female	35	Portuguese	PhD*	Post-Doc Researcher	Évora

* Pre-Bologna Process.

All the respondents were unanimous in stating that the questionnaire was perfectly clear, and that they had not felt doubts or difficulties in any of the questions; in addition, they considered that the online format of presentation did not exhibit any problems or errors.

1.2.2. Procedure

After its pre-test, the questionnaire was launched online through *Qualtrics*, and the respective access link was spread through e-mail and social media networks while avoiding any responses from author's personal and direct contacts.

The questionnaire was made available from the 2nd until the 5th of July 2014, as soon as at least 15 respondents had completed responding, and was shut off after the latter date, yielding a total of 22 accesses, and 16 completed questionnaires.

The gathered data were exported to *SPSS* to be statistically analysed.

1.2.3. Results

Since the evaluation of the means and standard deviations *per se* is not significantly informative, it was thus necessary to establish confidence intervals based in which conclusions could be drawn regarding each pictogram association to both target categories as well as its valence evaluation. The methodology proposed by Brazão and Garcia-Marques (2004) was followed. Only the first four best classified exemplars in each category would be retained for further utilization in the "to-be-constructed" IAT, thus maintaining the same superordinate target category stimuli number as used in the original computerised DA-IAT (Nosek et al., 2007b).

As the sample from which data were obtained was very small (n<30), bootstrapping - a non-parametric technique - was used to calculate means and confidence intervals for each of those dimensions (association to both target categories and perceived valence). Bootstrapping is considered particularly robust with small samples (although no consensus exists regarding minimal sample size…), while not requiring parametric tests traditional normality and symmetry assumptions (such as the one-sample t-test). As can be seen in Appendixes G (P**W**ID stimuli statistical analysis) and H (PwID stimuli statistical analysis), several of the exemplars score distributions are not normal, and as the sample is very small, the decision for undertaking statistical analysis using the bootstrapping technique was assumed for all dimensions – association with one superordinate target-category or the other, as well as the perceived valence attributed - to enable interpretation.

The computed intervals of confidence (at 95%) allow to extract information on: **1)** the degree of consensus regarding the mean values of the three dimensions associated with each pictogram, through the amplitude of the intervals (the smaller the range, the higher the consensus); **2)** the existence of significant differences among means between pairs of exemplars. If the intervals of confidence do not overlap, then the mean values of the two exemplars regarding the assessed dimension differ significantly, with a significance level of 0,05, but if they overlap, they do not significantly differ from each other. Hence, it is possible to select exemplars that differ in the degree of association with either target labels, but that resemble in valence; and, **3)** determining if a given exemplar is associated with the expected target category or its counterpart, and if it has a positive, negative or neutral valence.

For this evaluation, the used scale can be divided in three thirds or in half, depending on the objectives one's aiming at. It was opted to divide the scale in half (although conclusions drawn would be the same if the other option was chosen instead); the middle point of the scale corresponds to 3,5. Thus, **a)** if the confidence interval associated with the pictogram mean evaluation of association with either category label or valence does not include the value 3,5, and its average is above 3,5, we infer, with a degree of confidence of 95% that the image is considered as being associated with the category label in appreciation (or that its valence is positive); **b)** if the confidence interval associated with the image mean evaluation of association with either category label, or valence, does not include the value 3,5, and its average is below 3.5, we can infer, with a degree of confidence of 95% that the image is considered as not being associated with the category label in appreciation (or that its valence is negative); and, lastly, **c)** if the confidence interval associated with the image mean evaluation of association with either category label, or valence, includes the scale middle point, we do not have confidence to infer whether it is consensually considered or not to be associated with one category or the other, nor if its valence is positive or negative, regardless of the average being above or below 3,5.

A – Persons With Impairments and Disabilities Stimulus Set

According to the guidelines presented above, the bootstrapping data show that all of the images expected to be associated with the category "Persons With Impairments and Disabilities" are undoubtedly associated with this category, and not to its counterpart “Persons without Impairments and Disabilities” (**Appendix G**).

In what concerns valence, none of pictograms was consensually evaluated as being either positive or negative, except for pictogram C7, the only unquestionably valenced as being negative. All other exemplars may then be regarded as holding a “neutral” stance. Yet, these results might be related to social desirability, at least to some extent, since the group of pictograms expected to be associated to the superordinate category “People without Impairments and Disabilities” yielded quite different results, as will be seen further below.

Furthermore, the images that gathered greater consensus regarding the level of association with the category P**W**ID were pictograms C1 in first place and, in second, pictogram C3. These same images were also the ones that gathered greater consensus regarding their "no association" to the opposite category; the consensus was calculated through the differences between the upper and lower limits of the confidence interval. On the other hand, pictograms C8 and C2 were the ones that least consensually were associated with P**W**ID and PwID, respectively. In what concerns valence, the most consensually “neutral” image was pictogram C4, while pictogram C3, was the least consensual regarding neutrality.

In sum, the selected items to represent the category “Persons with Impairments and disabilities” are: C3, C4, C6 and C5.

B – Persons without Impairments and Disabilities Stimulus Set

As to what concerns the set of images expected to be associated with the category “Persons without Impairments and Disabilities”, all but one are undoubtedly associated with this category, and not to its counterpart “Persons With Impairments and Disabilities” (**Appendix H**). Pictogram S3 was the only one for which neither the expected association with this category nor the non-association with its counterpart were confirmed; as this constitutes an ambiguous stimulus, it was discarded from eligibility as an exemplar. This also determined the exclusion of its counterpart stimulus included in the other set, despite its good classification, as it could not be risked to have its categorization eventually based in an irrelevant feature (the number of human figures).

Regarding valence, all the pictograms in this set were consensually evaluated as being positive, which is a strikingly disparate result when compared with the results obtained for the counterpart category already described above.

In what respects consensus related to the level of association with the category PwID, the most consensual were pictograms S4 in first place and, in second, pictogram S2. Pictograms S5 and S2 were the most consensual regarding their "no association" to P**W**ID category. Conversely, not surprisingly given its ambiguity, pictogram 3 was the least consensually (not) associated with P**W**ID and PwID.

Finally, as to what concerns valence, the most consensually positive image was pictogram S5, while pictogram S2, was the least consensual regarding positivity.

Summarizing these results, the exemplars selected to represent the category “Persons without Impairments and Disabilities” in the DA-IAT are: S4, S2, S5 and S1.

2.6. Discussion

The information yielded by these statistical analyses allowed for the selection of the pictorial stimuli that, at this stage reunite more conditions as exemplars in a new version of a disability IAT.

In this study the degree of association of each pictogram with either target-category was measured, as well as its valence. These were fundamental issues to be assessed if an adequate set of stimuli was to be gathered. Each exemplar must undoubtedly pertain to one and only one target-category, an issue that results showed to be accomplished, except for one item in the category “Persons without Impairments and Disabilities” that was ambiguous and thus could not be used (e.g. Lane et al., 2007; Nosek, Greenwald, & Banaji, 2007a). Stimulus S3, might have looked as someone helping another person, thus justifying its ambiguity and the positive valence (as helping is generally considered positive).

As what concerns valence, the most striking result was of major importance: all but one of the category candidate exemplars expected to be associated with the category “Persons With Impairments and Disabilities” were considered to be neutral, whereas all of the exemplars in the other category were consensually evaluated as positive. This result may be due to the social desirability effect; the acknowledgement of one’s more immediate response as indicating prejudice if a response in the left half of the scale was signalled. On the other hand, no one felt compelled not considering “normalcy” as positive.

It must be stressed out that each set of stimuli should have an equal number of positive and negative valenced exemplars in each category (or in this study “neutral”/positive) in order to control for stimulus confounds based on irrelevant characteristics – in this case all of the neutral exemplars pertain only to the P**W**ID category, while all of the positive exemplars pertain to PwID’s category. This is not the ideal situation, as an equal number of positive, negative or neutral stimuli in each target-category would be more adequate (Lane et al., 2007); however, these were the results with which the work was further developed.

2.7. Conclusions and limitations

This pilot study aimed at contributing to the development of a sound Disability Attitude-IAT; target-category label, as well as its respective exemplar stimuli, were carefully selected according to the relevant theoretical frameworks underlying both disability conceptualisation, and IAT structure and process. Furthermore, given overall literature omission regarding stimuli selection, explicit, theoretically based criteria were established and supported on statistical analysis; in addition, it was also deemed important that these IAT components reflected ecological and cultural significance and adequacy.

The established objectives were globally accomplished. However, some limitations are worth noting. The lack of more heterogeneous target category exemplars allowing for differently valenced stimuli, may have arisen, at least in part, from the sample's very small size, and to a lack of a more substantial pool of items to test; hence, the respective superordinate target categories composition is also necessarily limited by this particular issue.

Moreover, the set of final stimuli that compose the target-category "Persons **With** Impairments and Disabilities" is not sufficiently broad in scope, while it is also not representative of the functional diversity in what more strictly concerns to the group designated by the aforementioned label. This is also associated with the conceptual model behind the target category-label conceptualization and operationalization; the bio-psychosocial model of disability encompasses an umbrella definition of "disability" that poses great operationalisation challenges, as referred before; furthermore, the use of pictograms does not help in minimizing this, as impairments and disabilities which are not visually evident are not adequately portrayed (such as cognitive or intellectual disability). Thus, this disability IAT may be more accurately described as a measure of implicit attitudes towards persons with physical impairments and disabilities.

Finally, these items should have been further evaluated after their introduction as exemplars in the IAT structure in order to understand in what manner persons would have responded in conditions similar to those that would be presented to the participants in the final study, mainly because the subjective evaluations undertaken by the participants in this pilot study are more deliberate in nature than would be the answers given in such conditions. Thus, in such an investigation, the resulting IAT would be pre-tested, and the results analysis should focus the evaluation of mean latencies associated with each exemplar to verify if any had constantly yielded more distended response latencies, as well as higher error frequencies. Items presenting this type of problems should be re-assessed as to the possible reasons justifying these observations, and eventually substituted by another exemplar.

Chapter IV

The main study: Rehabilitation Professionals' Implicit and Explicit Attitudes towards Persons with Impairments and Disabilities and their Relation with Prior (and ongoing) Contact

The next sections are devoted to the description of the leading study which had the general aim of evaluating a group of professionals who work with persons with impairments and disabilities concerning their implicit and explicit attitudes towards this specific population, as well as exploring the influence of contact on these variables. To accomplish our goals a correlational methodology was used. The implicit attitudes were evaluated through the pictorial DA-IAT measure previously developed.

1. Method

1.1. Participants

All the participants were recruited in an institution that delivers several services to children, adolescents and adults with and without impairments and disabilities. It includes two centres specialized in the intervention with P**W**ID. The first of these specialized centres is divided in two sub-centres: **1)** one focuses in the delivery of professional training services (e.g. professional courses including an internship period), for adult clients with sensorial impairments and disabilities. Most of these clients maintain high levels of independence and autonomy (when compared to clients of the other sub-centre), and an absolutely independent life, despite facing varying levels of psychosocial difficulties and barriers associated with their impairments and disabilities; individuals without impairments and/or disabilities also significantly attend this centre in a logic of inclusion; and, **2)** other sub-centre primarily devoted to the development of (re)habilitation processes of individuals with multiple disabilities and impairments (mainly visual, auditory and intellectual), being communication generally greatly compromised; here the most part of the clients' functional profile is characterized by low levels of independence and autonomy – and are, therefore, very dependent on caregivers. Defiant behaviours – especially auto and hetero-aggression - are not rare. The second specialized facility provides vocational and professional orientation services to the entire group of clients above 15 years old from all centres and services, either with impairments and/or disabilities or not; furthermore, it is also open to the involving community.

Forty-nine professionals working in these centres voluntarily participated in the present study. This sample included 41 women (83.7%), and 8 men, and their ages ranged between 22 and 63 years old (M = 41.71; SD = 9.719). The original sample comprised 51 participants; however, the data of two of them had to be discarded since they indicated having impairment(s) and disability(ies) and their answers could therefore introduce unwanted variance in the results.

In what concerns formal education, the sample presented the 9th grade as the minimum educational level attained (10.2%), and the majority held a “pre-Bologna” higher education course: 51% held an undergraduation (10.2% attained a Bologna undergraduation) and 12.2%, a masters degree (4.1% held a Bologna masters). In addition, as to what refers to specialized training, 83.7% of the participants indicated that they had frequented at least one course that they considered important to their professional contact and practice with P**W**ID. These courses contents (including academic education as well as courses not conferring any educational degree) were mostly related to areas associated to the intervention with PWID, according to the needs of the clients of the centres (e.g. Special Education and Rehabilitation, Orientation and Mobility, Portuguese Sign Language or Braille).

Most respondents were educators (49%; professionals responsible for orienting and implementing intervention objectives regarding Daily Life Activities, Orientation and Mobility, Communication, Occupational Activities, and so forth), 14.3% were trainers, and 12.2% were teachers. The sample also included other professionals (12.2%) such as Portuguese Sign Language interpreters, psychologists and psychomotricists. Administrative and logistical management related collaborators (10.2%) as administrative staff (e.g. secretary), or the maintenance services personnel (e.g. responsible for laundry and ironing services), were also included in the sample since they also contact with P**W**ID in their work context, although eventually not as frequently or intensely as others.

The period of experience working with clients with impairments and disabilities ranged from 1 week to 33 years (M=11.36, SD=8.37; measured in years). Most participants have been working with P**W**ID between 11 and 20 years (34.7%), and 28.4% has between 4 to 10 years of experience, while 24.5% of the sample has up to 3 years of experience with this population in a professional-client relationship (please refer to Appendix I for the frequency distribution of experience intervals).

Moreover, besides direct contact with P**W**ID in a professional-client relationship, 98% of the participants reported having co-workers with impairments and disabilities, approximately 55,1% referred having a friend, and 36,7% a family member with impairments and disabilities with whom they maintained direct contact during the last year. Specifically, 30,6% of the sample also reported having friends and family members with impairments and disabilities cumulatively with clients and co-workers, while an equal proportion also indicated having a disabled friend or family member. Hence, more than half of the sample (60,2%) had extra-professional relationships with people with impairments and disabilities, whereas approximately 30,7% only contacted with this population in a professional setting; just one participant reported having contact solely with clients with impairments and disabilities (Appendix J).

In addition, the co-worker with impairment(s) and disability(ies) with whom each participant more frequently contacted during the last year were mainly persons with sensory impairment(s) and disability(ies) – auditory (65.3%), visual (18.4%) and, to a lesser extent, auditory and visual (6.1%) – according to the participants’ brief descriptions of their situation (Appendixes K and L for the category dictionary and occurrence analysis per category, respectively).The more frequently contacted clients during the last year were persons mainly characterized as having sensory impairment(s) and disability(ies) – auditory and visual in a greater extent (55,1%), and, less frequently, clients with auditory impairment and disability (12,2%) and with multi-impairments and disabilities (12,2%) (Appendixes M and N). Most friends with whom participants had more frequently contacted during the last year were also characterized as having mainly sensory impairment(s) and disability(ies) – visual in a greater extent (16,3%), and, less frequently, auditory impairment and disability (12,2%); physical/motor impairments and disabilities were as frequently reported as auditory (12,2%) (Appendixes O and P). Lastly, in what concerns family members, those with whom participants most contacted during the last year were collateral (77,8%; e.g. uncle, cousin, niece) and ascendant family members (11,1%; e.g. grandmother), and were characterized as having mainly physical/motor impairments and disabilities (44,4% of those who have a family member with impairment(s) and disability(ies)), and, less frequently, impairments and disabilities in global and/or specific mental functions (22,2%), and auditory or visual impairment(s) and disability(ies) (11,1% each category; Appendixes Q and R).

1.2. Instruments

1.2.1. Implicit Attitudes towards Persons with Impairments and Disabilities

As previously stated, a Disability Attitude - IAT was developed and used to evaluate participants' implicit attitudes towards persons with impairments and disabilities; the 7-block structure was used.

The IAT was administered via a portable computer with a 15-inch screen[6], using *Inquisit 3* software in a Windows 8.1 Pro operative system. The program used the Picture-IAT script (please see Appendix S for a reproduction of the *Inquisit 3* script used) made available in Millisecond website, where the relevant alterations regarding the attribute and target categories' exemplars were introduced, including the previously selected pictograms and attribute target stimuli words as indicated below.

In the present work, the concepts at stake in the IAT are the target categories of interest previously defined and labelled as "Persons **With** Impairments and Disabilities" (P**W**ID; primary attitude object), and "Persons without Impairments and Disabilities" (PwID), and the valenced attributes "Good" and "Bad".

The eight pictograms selected in the previously presented pilot study were used as superordinate target category exemplar stimuli – four for each target categories - as in the original DA-IAT (Nosek et al., 2007b). Some resolution adjustments had to be made so that the program was able to use them, and the general IAT layout was possible (such as the relative position of labels without any overlap between them

---

[6] Computer features: **1)** Processor: Intel® Core™ i3-3110M CPU @ 2.40GHz 2.40 GHz; **2)** RAM: 4.00 GB; **3)** System type: 64 bits operative system, processor based in x64; and **4)** QWERTY keyboard.

or with the symbol displaying an error); nevertheless, all the proportions within and between sets were maintained.

The attribute categories exemplars were selected from the ones used in the Portuguese version of the Age-IAT available at Project Implicit's Portuguese website[7]; six stimuli out of the eight available were selected to represent each attribute label, as observed in the PI's Disability IAT. The attribute label "Good" comprises the stimuli: "Joy" ("Alegria"), "Wonderful" ("Maravilhoso"), "Love" ("Amor"), "Peace" ("Paz"), Laughter" ("Riso") and "Happy" ("Feliz"); its counterpart category "Bad" includes: "Bad" ("Mau"), "Terrible" ("Terrível"), "Awful" ("Horroroso"), "Failure" ("Falhanço"), "Evil" ("Malvado") and "Horrible" ("Horrível").

In each block, the stimuli were randomly presented in the middle of the screen, requiring the participants to classify them correctly according to the categories displayed at the upper left and right corners, using "E" and "I" keys (QWERTY keyboard). If and error was made, a red 'X' appeared underneath the stimulus, and the correct response had to be given for the experiment to continue. The intertrials interval was set to 250 milliseconds (please refer to Appendix T for a table summarising the used DA-IAT structure).

In the ***first block*** participants were asked to discriminate between the target categories and hence had to classify them as pertaining to either ''Persons **With** Impairments and Disabilities" (PWID) or "Persons without Impairments and Disabilities" (PwID; Initial target-concept discrimination); it comprised 20 trials. The ***second block*** required the participants to practice the classification of the attribute stimuli according to the categories "Good" and "Bad" (20 trials; Associated Attribute Discrimination).

In ***block three*** (20 trials), participants practiced the first combined classification task of the target and attribute categories (i.e., "Persons With Impairments and Disabilities"+"Good", or "Persons without Impairments and Disabilities"+"Bad" share the same response key, respectively). ***Block four*** included the same task, and comprised 40 trials; this was the first test of the first combined association task. In ***block five*** participants practiced the reversed target-concept discrimination (20 trials). In the ***sixth block*** (20 trials), the participants were required to practice the reversed target-concept discrimination task (i.e., "Persons With Impairments and Disabilities"+"Bad", or "Persons without Impairments and Disabilities"+"Bad". Lastly, the ***seventh block*** (40 trials) represented the test block of the reversed combined task (please refer to Appendix U for screen images of each block instructions).

The fundamental assumption regarding the IAT is that responses will be faster and more accurate (i.e easier) when categories closely associated in memory share the same response key, than when they do not (e.g. Lane et al., 2007; Teige-Mocigemba et al., 2010). In this sense, Blocks **4** and **7** are the ***critical test-blocks*** and, in conjunction with practice blocks **3** and **6**, are necessary to compute the IAT effect (D index) that expresses implicit attitudes towards persons with impairments and disabilities. The critical test-blocks order was counterbalanced; participants coded with an even number were asked to do the compatible task first, whereas participants coded with an odd number performed the incompatible task first, as defined in the table in Appendix T.

---

[7] Available at https://implicit.harvard.edu/implicit/portugal/selectatest.jsp.

It is fundamental to stress that, due to the coding undertaken in the used IAT script, the compatible and incompatible blocks do not correspond to the more frequent expectations regarding the associations between target and attribute categories: “Persons With Impairments and Disabilities” and “Bad” and “Persons without Impairments and Disabilities” and “Good”; instead, the compatible blocks were the otherwise traditionally “incompatible” pairs - “Persons With Impairments and Disabilities” and “Good” and “Persons without Impairments and Disabilities” and “Bad”. The IAT programming script therefore displays: **1)** “Persons **With** Impairments and Disabilities” as “TargetALabel” and “Persons without Impairments and Disabilities” as “TargetBLabel”; and, **2)** “Good” as “AttributeALabel” and “Bad” as “AttributeBLabel”. Therefore, in the script “compatible” refers to the association of “TargetALabel” and “AttributeALabel”, whereas “incompatible” refers to the association between “TargetBLabel” and “AttributeBLabel”. Hence, negative IAT D scores will correspond to associations of “Persons **With** Impairments and Disabilities” and “Bad” and “Persons without Impairments and Disabilities” and “Good” (i.e. automatic preference for abled over disabled), and, logically, positive values of D correspond to the higher association of the counterpart target category-attribute pair, meaning automatic preference for disabled when compared with abled.

The IAT’s D score may theoretically range between -2 and 2; a value of 0 represents no difference in response latency between the two stimulus-pairing conditions (i.e. blocks 3/4 versus blocks 6/7; Nosek et al., 2007b; p.9, footnote 4).

After data collection, its basic descriptive statistics were computed through the respective SPSS syntax also made available in Millisecond’s Software website; this syntax computes its calculations according to the improved scoring algorithm developed by Greenwald, Nosek and Banaji (2003; Appendix V).

In the evaluated sample, the mean D score obtained was -0,830 (SD = 0,328); the D scores (IAT effect) ranged between -1,31 and -0,168 (Appendix W). This overall mean value is higher (in module) when compared to the value obtained by Nosek and collaborators (2007b; these authors also used the improved scoring algorithm to compute statistical analysis) in the Disability IAT conducted through publicly available websites during approximately six years, gathering data from a diverse sample (M= 0,45; SD= 0,43; N=38544), and thus also suggest the sample overall automatic preference for “Persons without Impairments and Disabilities” when compared to “Persons **With** Impairments and Disabilities”.

However, as the analysis of the Shapiro-Wilk test result reveals (Appendix W), the IAT Score does not follow a normal distribution. However, it is not considered to be significantly deviated from it as the critical ratio (Skw/Skw Std. Error= 1.61) value demonstrates (it must be comprised between –2 and 2 in order not to be considered a significant deviation from a normal distribution), although it is somewhat elevated. In addition, by the Central Limit Theorem (CLT), as n≥30, the violation of this assumption will not compromise one-sample t-test results. This test shows that the mean scores in the IAT are significantly below 0 ($t_{(48)}$=-17,705; *p*<0,05); it was also estimated, with 95% confidence, that this variable real mean is comprised between -0,924564 and -0,735984 (**Table 4.1.**).

Table 4.1. *IAT mean D-score one-sample t-test results.*

	Test Value = 0					
	t	**df**	**Sig. (2-tailed)**	**Mean Difference**	**95% Confidence Interval of the Difference**	
					Lower	**Upper**
IAT	-17,705	48	<0,001	-0,830	-0,925	-0,736

*α=0.05

Hence, the relative strength of association between “PwID”+“Good” and “PWID”+”Bad” is significantly greater than the association between the reverse pairings. It can therefore be stated that this group of professionals significantly revealed negative implicit attitudes towards PWID. Moreover, classifying D-scores into broad categories, according to the psychological conventioned effect size break points [(.15) for ‘slight’, (.35) for ‘moderate’ and (.65) for ‘strong’] yielded by large-scale studies undertaken in Project Implicit website (https://implicit.harvard.edu/implicit/demo/background/raceinfo.html), qualitatively revealed that 69,4% (n=34) of these professionals shown a strong preference for “PwID”, whereas 16.3% (n=8) had “a moderate” and 14.3% “a slight” preference for “PwID” when compared to “P**W**ID”. Given that these sub-groups include very disparate numbers of participants, it is not possible to test the significance of these differences, or to precisely estimate the level of association between those categories and other relevant variables in this study (e.g. sex, age, educational level, intergroup contact).

This Disability Attitude - IAT version presented good internal consistency; Cronbach’s *alpha* was calculated for the first (blocks 3 and 4) and second (blocks 6 and 7) pairs of test blocks, yielding values of 0,774 and 0,811, respectively.

1.2.2. Questionnaire booklet *(instruments presented in order of appearance)*

1.2.2.1. Explicit Attitudes towards Persons with Impairments and Disabilities

This outcome variable was measured through the application of one of the most widely known and used instruments regarding self-reported attitudes towards this specific population, albeit not free from criticisms due to its dubious unidimensional structure, factorial ambiguity or uneven number of negative and positive items (Martins, 2008). The “Attitudes toward Disabled Persons Scale – Form O” (ATDP – O; Yuker, Block, & Campbell, 1960; cited by Yuker & Block, 1986) is a unidimensional 20-item scale whose answers are given according to a 6-point Likert-type scale ranging from -3 (“I disagree very much”) to +3 (“I agree very much”), and where a neutral point (0) is purposely absent to avoid neutral answers. The theoretical total score can range from 0 to 120 (Yuker & Block, 1986).

Two other alternate forms of this scale were developed – Forms A and B – to provide flexibility and enable its use in pre-post-test designs since they are considered to be equivalent to the original (Yuker & Block, 1986). Nevertheless, Form O is frequently preferred for it has fewer items and takes less time to complete and score (e.g. Martins, 2008). The Portuguese version of the original form of this scale was also the preferred in the present study (Appendix X– ATDP-O English Version).

In what concerns ATDP – O psychometric properties, 79,7 was the normative mean yielded from Yuker and Block's (1986) analysis of 38 studies using this form of the scale; this refers to American nondisabled participants. Furthermore, regarding its reliability, test-retest reliability yielded a median of 0,83 (values ranged from 0,70 to 0,95 for an interval of 5 weeks or less), a median of 0,80 for split-half reliability (values ranged from 0,75 to 0,85), and a Cronbach's α of 0,76 (Yuker & Block, 1986).

According to the authors, "relatively high scores indicate the respondents perceive disabled persons as similar to nondisabled persons", hence reflecting more positive attitudes, whereas "low scores indicate the respondent perceives disabled persons as different from nondisabled persons", and thus reflecting negative attitudes. In addition, Yuker and Block stress that individual items punctuations should not be interpreted, since only the total score is meaningful (Yuker & Block, 1986, p. 6-7; Martins, 2008).

The Portuguese version of the ATDP – O was translated, adapted and validated from the original by Martins and Pais-Ribeiro (2007; Appendix Y) following a first attempt by another author several years ago. Those authors' main goal was to guarantee reliability and validity exempt from morphological, syntactic or semantic errors, while keeping the original layout, as well as instructions and filling orientations (Martins, 2008). The psychometric properties of the Portuguese version were tested with a convenience sample of 411 higher education students from courses related to health and other academic domains, and according to the procedures described by Yuker and Block (1986). The reliability evaluation showed an adequate Cronbach's α of 0,77 (0,76 in the original version). The mean score for the Portuguese population was of 68,5 (79,7 was the mean score of the original version; Martins & Pais-Ribeiro, 2007).

The Portuguese version suggested the existence of several dimensions, a feature also identified in previous studies (Antonak, 1980; cit. by Martins, 2008). Nevertheless, as the authors had assumed the procedure followed by Yuker and Block, the factor analysis was not presented in detail, since the results suggested a similar structure to the one presented by the American version (Martins, 2008). In the present study, the basic assumptions for conducting a factor analysis are not present, namely the ratio between the number of cases per variable (since the sample is somewhat small for that purpose) and the normality of each item distribution; a ratio of 5 to 10 participants per item would be required (Kass & Tinsley, 1979; cited by Field, 2011); hence, a sample of a minimum of 100 to 200 participants would be essential for such an analysis; hence it was not attempted.

In the present investigation, some adaptations were introduced in order to adequate the statements with the chosen concept operationalization referring to the group of interest; "Persons with Impairments and Disabilities" ("Pessoas com Deficiências e Incapacidades") was used instead of "disabled persons" ("Pessoas com Incapacidade(s)"). Other adaptations were made upon confrontation between the Portuguese and the original version in English of ATDP - O, as this yielded some doubts related to the face validity of some of the statements translation from American English to Portuguese. An expert in English revised each item while comparing them to their original English and Portuguese versions, and offered advice as to how to preserve the original meaning regarding the more suitable and familiar terminology to the national population in general. The Portuguese version layout was also modified in order to present the items in ascending order, as is usual in any attitude scale (Appendix Z).

This new scale varies between 0 and 102, with 51 as a midpoint (instead of 60); higher scores still signal more positive attitudes towards persons with impairments and disabilities. The mean ATDP-O score obtained by the professionals' sample was 60.20 (SD=9.97), with final scores ranging between 33 and 80 (Appendix AA). Comparison between these values and those associated with normative data is not possible since the resulting scale in the present work is smaller than the complete scale that yielded them; for the same reason, it is not also possible to compare them to those obtained by Martins e Pais-Ribeiro (2007) with the Portuguese version.

The ATDP-O score variable follows a normal distribution, as the Shapiro-Wilk test and the critical ratio (Skw/Skw Std. Error) demonstrate (Appendix AA). Hence, one can be confident on conducting one-sample t-test to assess if this variable mean is significantly above 51 (i.e. if it significantly indicates positive attitudes towards PWID). This test has revealed that the mean scores in the IAT are significantly above 51 ($t_{(48)}$= 6,460 p<0,05; **Table 4.2.**); it was also estimated, with 95% confidence, that this variable real mean is comprised between 65,58 and 73,23. It can therefore be stated that the evaluated group of professionals significantly revealed positive explicit attitudes towards PWID.

Table 4.2. *ATDP-O mean score one-sample t-test results.*

	Test Value = 51					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
ATDP-O	6,460	48	<0,001	9,204	5,38	13,03

*α=0.05

The ATDP-O version used in the present work revealed a Cronbach's *alpha* between 0,625 (with missing values recoded with 0, a neutral position, according to the authors' orientations regarding such circumstances: no more than three missing values per participant for their results to be interpretable; Yuker & Block, 1986), and 0,645 (excluding the two participants with missing values), neither of which is standardly considered adequate, and hence denouncing low reliability. Further item analysis and process (e.g. outlier scrutiny and correction through *winsorizing* procedure) led to a final scale composed by 17 items and a Cronbach's *alpha* of 0,677, which is roughly considered an indicator of adequate reliability; items 2, 3 and 5 were eliminated from further statistical analysis.

1.2.2.2. Socio-demographical data.

A section devoted to the collection of demographics was included in the questionnaire, namely: **1)** gender; **2)** age; **3)** nationality; **4)** civil status; **5)** educational level; **6)** profession; **7)** number of years working in the organization and in the centre where they performed their professional functions; **8)** number of years working with PWID (which may also be considered a variable of contact); **9)** if they had any specific training in the area of impairments and disabilities (including the indication of up to three training courses considered important to their work); **10)** if they personally had any impairment and disability (including a short description of their situation) to control for eligibility criteria; and, finally, **11)** they were asked to state what their understanding was regarding “Persons with Impairments and Disabilities”, to control for the operational definition of the concept and to what extent it was shared by the participants in the sample[8].

1.2.2.3.Direct contact with Persons with Impairments and Disabilities

Direct contact was measured through two groups of measures: **1)** a standardized scale developed by Yuker and Hurley (1987) – Contact with Disabled Persons Scale (CDP), which was translated and adapted into Portuguese; and, **2)** two questions based on the ones used by Abrams, Crisp, Marques, Fagg, Bedford, and Provias (2008) referent to the subjective evaluation of frequency and quality of the relationship between their participants and their grandchildren, designed according to the principles stated by Brown and Hewstone (2005). These questions were adapted to suit the present study objectives, specifically in what concerns the target group, and were applied regarding four types of relationship contexts where the contact between the two groups – PwID versus P**W**ID - might occur: co-workers, clients, friends and family members. The intention was to evaluate the relationship between the perceived quantity and quality of contact and implicit and explicit prejudice in these different relationship contexts where at least some of the optimal conditions defined by Allport’s Contact Hypothesis and its further developments were expected to be present.

Each one of these groups of contact measures will be described further below.

A. Perceived quantity and quality of contact.

Research has shown that both quantity (amount/frequency) and quality (e.g. equal status, common goals, or subjective ratings of overall perceived quality) of contact are both important for the reduction of explicit intergroup prejudice (e.g. Pettygrew & Tropp, 2006).

In order to evaluate the quantity and quality dimensions of intergroup contact in very broad and general terms, two questions were adapted from those used by Abrams and collaborators (2008), which in turn were designed within the principles defined by Brown and Hewstone (2005). These questions were then applied to different types of relationship that professionals in the sample had (and might have had) with

---

[8] Answers to this question were not subject to content analysis since the majority was too complex to analyze conveniently in the available time for undertaking the statistical analysis of all the data.

persons with impairments and disabilities: co-workers, clients (i.e. targets of professional intervention), friendships and family. The questions were then[9]: **1)** *"How often have you maintained contact with any of your (co-workers/clients/friends/family members) with impairment(s) and disability(ies) during the last year?*" (measured in an 8-point Likert-type scale ranging from 1 = *"Never."* to 8 = *"Every day."*); and, **2)** *"How would you evaluate the quality of the relationship you maintain with the (co-worker/client/friend/family member) with impairment(s) and disability(ies) with whom you contacted more often during the last year?* (answers were also evaluated in a Likert-type scale, although ranging from 1 (*"Very negative."*) to 7 (*"Very positive."*)

Data concerning the impairment(s) and disability(ies) situation(s) of the co-worker, client, friend, and family member with whom the participant had contacted more frequently during the last year were gathered, as well as their age group, given that literature has also shown that the type, severity and prognostic of the disability to be important factors as sources of attitudes towards this population, and that sharing similar demographic and personality features with P**W**ID with whom one interacts, among others, promote more positive attitudes towards this group, especially in the case of friendships (e.g. Yuker 1988, 1994).

No specific questions were conceived regarding the particular optimal conditions that contribute to the relationship quality, mainly because this would make the questionnaire too time consuming. However, it was considered that the specific context of work provided by the organization where data were collected could allow for at least two distinct types of relationship with PWID, and which the majority of the sample experienced (and the main reason why it was selected): with co-workers and clients with impairment(s) and disability(ies); these may be considered, to a greater extent, forms of involuntary intergroup contact. In addition, in such a professional context, it is logical to expect that the relationship with co-workers with impairments and disabilities meets at least some of the above optimal conditions, and it is not unreasonable to expect that friendships can also naturally occur as well. Also, it was also considered important to gather data regarding voluntary intergroup contact, and thus participants were asked about extra-professional relationships with P**W**ID: with family members and friends.

Preliminary statistical analysis on these items revealed that except for the amount of contact with family members with impairments and disabilities, all the quantity and quality indicators for the several relationship types were highly asymmetrical and significantly deviated from the normal distribution, hindering further statistical analysis (Appendix AB). As previously stated, the participants are unevenly distributed by the four relationship types; this necessarily impacts in descriptive variables outputs. Hence, two composite indicators of quantity and quality of contact were created; participants reporting not having friends or family members with impairments and disabilities were assigned a score of 1 in each one of the respective amount and quality ratings, thus ensuring they had lower scores than the scores of all participants who reported

---

[9] When participants considered they had contacted with equal frequency with several colleagues with disabilities, they were instructed to choose only one of them to answer the questions about their situation, age group and quality of the relationship, based on any relevant personal criteria (no guidelines regarding these were given). This instruction was repeated whenever the same issue was raised in relation to any other type of relationship (this instruction was stated in the questionnaire).

contact within these types of relationship. Next, all contact amount and quality scores across the four types of relationship were summed and averaged for each participant, creating two general indicators that maintain the respective scales ranges; the participants reporting extra-professional contact with P**W**ID still maintain higher scores in these new indicators.

The amount of contact index averaged 5,18 (SD=1,08), representing an overall moderate frequency of direct contact with P**W**ID, located between "A few times per month." and "Once a week" (please refer to Appendix AC for these indexes descriptive statistics). This result is coherent with the frequency distribution of the index almost along all the extension of the scale (ranging between 1 and 8). Furthermore, participants' mean scores distribution is not very asymmetrical (Skw=-0,119), nor very significantly deviated from the normal distribution (Sk/Std.Err.Sk= -0,35). In addition, the Shapiro-Wilk test outcome also supports this result which indicates that no statistical evidence exists indicating that it does not follow a normal distribution. Generally, data suggests an heterogenous experience of contact, in mean, among all the participants.

One-sample t-tests were performed for both indexes, since assumptions for conducting them were present. Regarding amount of contact, this test result revealed that the mean score in the index is significantly above the scale midpoint [$t_{(48)}$= 4,412; p<.01; **Table 4.3.**); anchored in 4,5], hence indicating higher levels of perceived frequency of contact in the sample. It was also estimated, with 99% confidence, that this index real mean is comprised between 5,446 and 6,271.

Table 4.3. *Amount of contact index mean score one-sample t-test results.*

	Test Value = 4,5					
	t	**df**	**Sig. (2-tailed)**	**Mean Difference**	**99% Confidence Interval of the Difference**	
					Lower	**Upper**
Amount	4,412	48	<0,001	0,679	0,266	1,091

*α=0.01

In what concerns the quality index, its mean score is also significantly above the scale midpoint, anchored in 4 ($t_{(48)}$= 4,424, p<.01; **Table 4.4.**)., thus indicating perceived quality of contact to be overall positive. In addition, its real mean was estimated to be included between 5,141 and 6,131.

Table 4.4. *Quality of contact index mean score one-sample t-test results.*

	Test Value = 4					
	t	**df**	**Sig. (2-tailed)**	**Mean Difference**	**99% Confidence Interval of the Difference**	
					Lower	**Upper**
Quality	4,424	48	<0,001	0,816	0,321	1,311

*α=0.01

B. Contact with Disabled Persons Scale (CDP).

The CDP was developed by Yuker and Hurley (1987) as an answer to the lack of a standardized, consistent, detailed and psychometrically sound measure of prior contact with people with disabilities. This scale is one of the most widely used instruments to evaluate contact with this population, and research undertaken in the last decades since its creation has demonstrated its reliability and validity (Pruett, Lee, Chan, Wang, & Lane, 2008).

CDP authors originally intended it to be a unidimensional instrument; although they did not preclude the adequateness and desirability of a multidimensional measure tapping several types of contact, they considered that a first standardized measure could be a first step, provided its psychometric soundness (Yuker & Hurley, 1987). Nevertheless, several authors have contended that it is actually a multidimensional measure, especially because different dimensions of contact are covered – amount, type, and an affective component linked to quality ratings – and these features would quite arguably originate one such instrument instead of a unidimensional one (Pruett et. al, 2008). In this sense, Pruett and collaborators (2008) have conducted an exploratory and confirmatory factor analysis which yielded an adequately fit three-factor model **1)** General (non valenced) interpersonal contact with persons with disabilities; **2)** Positive Contact Experiences; and, **3)** Negative Contact Experiences. Nevertheless, the sample was constituted exclusively of higher education American students who were studying in human service fields. Furthermore, the CDP does not address issues such as equal status and level of intimacy, among others already stated above, and which have already been redeemed as important (optimal) conditions in fostering effective reductions in prejudice against outgroups. Hence, further investigation regarding CDP structure is due before any generalizations attempts (Pruett et al., 2008).

The CDP scale is composed by 20 items, rated on a 5-point Likert-type scale ranging from 1 ("Never") to 5 ("Very Often"), to which are assigned five response categories; the authors preferred to use "undefined categories" rather than precise numbers because previous research had indicated that "perceived subjective frequency had higher reliability than specific numerical responses" (Yuker and Hurley, 1987). Theoretically, scores can range between 20 (thus indicating a complete lack of contact) and 100 (representing maximum contact in all areas covered; Yuker & Hurley, 1987).

There are not any reverse scored items, even if some refer to negative contact, for the authors were based in the assumption stating that the extent of contact is more important than its valence, since that extended contact fosters opportunities to also experience negative events with persons with impairments and disabilities, these would be expected to present the same variability in personal features as anyone else; this assumption was supported by data indicating lower general reliability when such items were omitted (Yuker & Hurley, 1987).

As what concerns to CDP's reliability, the authors reported median split-half coefficients of 0,93 and median Cronbach's *alpha* coefficients of 0,92; Wang's (1998; cited by Pruett et al., 2008) version using first person language, yielded a Cronbach's alpha coefficient of 0,87, and Pruett and Chan's (2006), an alpha of 0,89.

Since no homologous scale exists for the Portuguese population, nor any translation and respective validation of the CDP, its original version was translated and adapted to Portuguese via translation-retroversion. Special care was taken regarding item meaning and the familiarity of the terms used, while avoiding a literal translation of the original version. The items phrasing was equally adapted where necessary to express the target group adopted operationalization and labelling - "Persons With Impairments and Disabilities" - as well as to facilitate understanding, which resulted in a different verbal tense from the original. Thus, the scale was first translated by this dissertation author, and was afterwards revised by her advisor and co-advisor. Next it was finally handed to an expert in English language who revised each translated item; this expert also offered advice as to how to preserve the original meaning and regarding which terms would be more suitable and familiar to the Portuguese population in general whenever needed (please see Appendixes AD and AE for the original and the translated Portuguese versions of the CDP scale, respectively).

In what concerns the psychometric properties of this first attempt to develop a Portuguese version of the CDP, as with the ATDP-O, the present sample did not meet the conditions necessary to undertake a factor analysis. Furthermore, it was decided not to operate any item suppression upon asymmetry and normality analysis on them, in order to be possible to compare the mean value obtained with previously established reference values.

In the present sample, the mean CDP score was 63,35 (SD=9,913), which is close to the mean score values obtained by Yuker and Hurley (1987) in samples of several professional groups, such as nurses (M=57,0; SD=13,7) and rehabilitation personnel (M=67; SD=13,0), although the standard deviation is somewhat smaller than the obtained by those authors. The mean score value points to moderate levels of contact, and the variable follows an almost perfectly symmetric distribution (Skw= 0,018), and not significantly deviated from the normal (Skw/Std.Err.Skw=0,053), as the Shapiro-Wilk test result shows (Appendix AF). Furthermore, the CDP mean scores are significantly above 60 (the scale midpoint; $t_{(48)}$=2,363; p<.05; **Table 4.5.**), thus indicating higher levels of contact in the sample. In addition, the real mean score is comprised between 63,85 and 69,54.

Table 4.5. *CDP mean score one-sample t-test result.*

	Test Value = 60					
	t	**df**	**Sig. (2-tailed)**	**Mean Difference**	**95% Confidence Interval of the Difference**	
					Lower	**Upper**
CDP	2,363	48	0,022	3,347	0,50	6,19

*α=0.05

The CDP presented a Cronbach's alpha of 0,821 in this sample, which is considered a value indicative of good internal consistency, following the values obtained by this instrument authors (Yuker & Hurley, 1987), as well as Pruett and Chan's study (2006), as previously indicated above.

1.2.3. Disability-Attitude IAT and questionnaire pre-tests.

Before implementing the final instruments, two persons were asked to pre-test them to evaluate the correctness of instructions and questions formulations, i.e. if they were clear and easy to understand. This pre-test reproduced the procedure that was intended to implement with the sample.

The two board members of one of the centres where data would be collected were asked to participate in this pre-test, also as an incentive to the collaborators' own involvement in the study (mainly to instil a sense of confidence: if their hierarchic superiors had participated then there must not be any reasons to fear the involvement in the investigation). The participants in this pre-test and their respective socio-demographic features are listed in the table below (**Table 4.6.**).

Upon completing all the tasks proposed, it was asked if they had had any doubts in any of the instructions and questions presented, as well as any commentaries regarding the IAT or either of the instruments present in the questionnaire, or presentation format problems regarding features such as templates, colours or letter types.

Both respondents were unanimous in stating that the questionnaire was perfectly clear, and that they had not felt doubts or difficulties in any of the questions. Nevertheless, one of them suggested that re-ordering the contextualized contact questions to the final presented form, as the original presented order – co-workers, clients, family members and friends - had led her to evaluate a very close friend as a family member; she only realized that she would have the opportunity to respond more appropriately after she turned the page. The order of these questions was thus changed as proposed.

Table 4.6. *IAT and questionnaire pre-tests – Participants' socio-demographic features.*

Gender	Age	Nationality	Education	Occupation	District of residence
Female	46	Portuguese	PhD.**	Executive Board Member	Lisbon
Female	40	Portuguese	Undergraduate degree*	Board Member	Lisbon

* Pre-Bologna Process. ** Bologna Process.

It would have been more appropriate to pre-test the procedure and respective instruments with a broader group of participants regarding other significant features such as educational level, age or gender (especially in what concerns issues like language accessibility of the instruments). Yet contingencies like time available for undertaking such a task, as well as lacking a "convenient sample" were a reality. It might then be considered a limitation.

2. Procedure

2.1. Organization contact, authorization grant process and data collection preparation.

The organization department responsible for managing processes related to investigation requests was contacted. A formal authorization request directed to the board chairman was necessary (Appendix AG) and should include a description of the investigation project, an overview of the relevant literature, expected outcomes, method and relevant ethical issues (such as informed consent and data confidentiality) based in the Order of Portuguese Psychologists Code of Ethics, as well as exemplars of the instruments to be used. Following the authorization, a "Letter of Compromise" – stating the roles, responsibilities and obligations assumed by all parties involved - was signed (please refer to Appendix AH for a textual reproduction of this document); all further alterations to the project[10] were also informed to avoid any miscommunications and difficulties. As nothing was explicitly settled either in the "Letter of Compromise" document nor in the authorization form regarding the organization confidentiality and anonymity status, it will remain unidentified.

Following the organization board authorization, the department responsible for the management of investigation requests intermediated the contact with the centres where data collection was to be conducted. At the centres level, only the respective board members knew the project "real" objectives and hence, they were not included in the final sample, nor were the investigation purposes disclosed to anyone else outside these hierarchical positions. The board members insured: **1)** the necessary physical conditions to develop the investigation; **2)** informing the collaborators about the undertaking of an investigation in the centre and the respective period of data collection; and, **3)** organizing "data collecting shifts" to lessen the disruption caused by the investigation in the work dynamics established.

2.2. Investigation overview.

The leading investigation procedure comprised two parts: first, the participants completed the computerized Disability Attitude IAT using the exemplar stimuli selected in the pilot study described in the last chapter and, secondly, they filled in the questionnaire booklet. When first introducing the study to the participants, its specific objectives were not disclosed, and nothing was said regarding what constructs were being evaluated by the IAT, nor regarding what other variables would be measured. Instead, a disguised procedure was adopted to avoid priming effects from influencing the IAT (Fazio, 1995; cited by Lane et al., 2007); participants were informed that the research objectives were **1)** to deepen the knowledge in the area

---

[10] It is important to state that due to several contingencies leading to serious time restrictions the original investigation project suffered some alterations after the initial authorization for its conduction. The organization representative did not consider important to fill out a new document reflecting the introduced alterations (e.g. the original design included a control group and the evaluation of prejudice suppression).

of Social Psychology of Health regarding the way we process information in social situations; and, **2)** to study the influence of other variables on how we process this information. Furthermore, for accomplishing such objectives, they were informed that first, they would perform a “computer task” in which they had to assign words and pictures to categories, and then they would fill in a questionnaire that included measures that tapped into the variables of interest. Participants were also made aware that: **3)** their involvement in the investigation was voluntary and that they could abandon it at any time if they wished to do so, and that no consequences would arise from such a decision; and, **4)** that their participation was completely anonymous and confidential, inclusively in what regarded the organization and the centre where they worked in. This information was presented in a “pre-debriefing” written Informed Consent form. All the contacted collaborators agreed to participate (Appendix AI).

After giving this information the IAT procedure was very broadly described to the participants before they began the experiment; the compatible/incompatible stimulus pairings presentation was counterbalanced, as previously stated above. After ending the IAT, participants were handed a paper-and-pencil questionnaire booklet that included (Appendix AJ): 1) a cover page destined to the participant’s code number, and date of administration; **2)** a page briefly presenting what would be subsequently evaluated, and reminders of relevant aspects related to the informed consent presented previously; and, **3)** all the instruments for the evaluation of the remaining relevant variables, whose presentation followed the order: ATDP – O, demographics, contextualized contact (co-workers, clients, friends and family members), CDP, and the central concept operationalization control question; the instruments order was not counterbalanced. In this sense, the implicit measure was always administered first in order to control for priming effects arising from the completion of the ATDP-O, contextualized contact measure or CDP before its presentation, for they might have had affected IAT’s effect by allowing more deliberative processes to occur (and as a consequence, lowering response latencies in “Persons **With** Impairments and Disabilities”+Good blocks, contributing to level them out with the other critical target-attribute pair).

The participants’ order of participation was not predetermined; usually they autonomously directed themselves to the room where the data collection took place, whenever their professional responsibilities during the shift could be interrupted (upon previous scheduling when necessary). Hence, each participant was randomly assigned to each of the two IAT orders (compatible or incompatible first).

Data collection took place between July and September 2014.

The protocol was applied individually and each of the participants took between 30 to 45 minutes to complete all the tasks, after which they were debriefed regarding the investigation objectives and the reasons why they were not cognizant of these facts from the beginning. No participant retired the previously given permission and a written post-debriefing informed consent containing all the relevant information was signed (Appendix AK); most participants left their e-mail contact in order to receive post-investigation clarifications and were informed of the contacts they could use if additional explanation on any issues regarding their participation was needed.

3. Results

After presenting the methodology used to accomplish the objectives of the present work, the following sections are devoted to the presentation of the obtained results, as well as to the confirmation or rejection of the stated hypothesis.

3.1. Relationships between demographic variables, implicit and explicit attitudes, contextualized contact indexes and general contact

The first approach to the data intended to explore if any associations existed between the more relevant demographic variables and the key outcome variables in this investigation (**Table 4.7.** below). In what concerns sex, although theoretically relevant, its association with the other variables was not assessed for the two gender groups are too discrepant in size, and any significant result would therefore be biased (there are only 8 men in a sample of 49 participants).

Considering the relationship between the demographic variables analysed and implicit attitudes, these are generally very weakly, and non-significantly associated with implicit attitudes towards P**W**ID. According to results reported by research on the relationship between implicit attitudes and age (Nosek et al., 2007b), a negative relationship between age and implicit attitudes was also observed in the present sample (r= -0,048), pointing to more negative implicit attitudes in older adults; however it is such a weak correlation that both variables can hardly be considered to be associated at all. In addition, in what concerns the educational level of the sample, results are aligned with previous research, indicating that it is also not associated with implicit attitudes (r_s=-0,025; Pruett & Chan, 2006; Wilson & Scior, 2014).

Table 4.7. *Correlation coefficients between demographics, implicit and explicit attitudes, contextualized contact indexes and general contact.*

Measures		**Demographic variables**		
		Age	**Educational Level**	**Years working in the centre**
Implicit Attitudes	DA-IAT	-0,048	-0,025	0,123
Explicit Attitudes	ATDP-O	-0,210	0,275	-0,303*
Contextualized Contact	Amount Index	0,221	-0,205	0,177
	Quality Index	0,197	0,190	-0,014
General Contact	CDP	-0,107	-0,031	0,144
	Years working with PWID	0,457**	-0,031	0,748**

***** Correlation is significant at the 0,05 level (2-tailed).
****** Correlation is significant at the 0,01 level (2-tailed).
N= 49

Concerning explicit attitudes, all the demographic variables are weakly, and non-significantly associated with them, except for the number of years working in the centre (r_s= -0,303; p<.05), which is negatively, weakly and significantly associated with this variable; the number of years working in the centre can be interpreted as a more distal contact variable, and will be referred to below, in the discussion section. The correlation coefficient between explicit attitudes and age (r_s=-0,210), although weak and not significant, points to more negative attitudes as people get older, which is generally in accordance with the literature (e.g. Chan et al., 2009); nevertheless, some authors do not consider this variable important, as it can reflect the influence of other variables (e.g. education; Yuker, 1994; Yuker & Block, 1986).

Both contact amount and quality indexes are (very) weakly and not significantly correlated with the several demographic indicators analysed, and the same pattern is observed for CDP. Interestingly, CDP authors reported positive, yet weak, correlations of its score with age (r=0,23), while in the present sample a weaker and negative (and non-significant) correlation was found (r_s= -0,107), contrarily to what is more commonly observed in the literature. Yuker and Block (1987) suggest that such results seem to suggest that older participants with extensive contact with P**W**ID might hold more negative attitudes towards this population. The correlation between CDP and the educational level is very weak, negative and non-significant (r_s=-0,031), thus suggesting that they are not associated. Regarding the amount of contact index, it is weakly and positively correlated with age (r_s=0,221; following the magnitude generally encountered in the literature between CDP and age), suggesting a tendency of more contact as age increases; a similar result was found regarding its association with the number of years working in the centre (r_s=0,177), which was expected. On the other hand, the educational level is weakly and negatively associated with this contact index, suggesting that the higher the educational level attained, the lower the amount of contact with P**W**ID. In what concerns the contact quality index, it is both weakly and positively associated with age (r_s=0,190) and educational level (r_s=0,197), pointing to higher quality ratings as professionals are older and the attained educational level is also higher. Interestingly, it has a very weak and negative correlation with the number of years working in the centre (r_s=-0,014), cueing a decrease in quality ratings as general experience working with this population increases; however, it is such a weak and non-significant correlation that it may be considered that the two variables are not associated.

The strong, positive and significant correlation between the number of years working with P**W**ID and the number of years working in the centre (r= 0,748; p<.01) is not surprising, since both centres offer specialized services to that population, and most participants have been working there for several years (approximately 69,4% of the sample has been working in the same centre for at least 4 years).The significant, positive and moderate correlation between the number of years working with P**W**ID and age (r= 0,457; p<.01), is also not considered very important since it is natural that the older the professional, the higher the number of years of work with this population, especially when most of them have been working for many years with this group, and in the respective centre.

Given the general non-significance of the obtained results within this section and, therefore, the lack of statistical evidence attesting their effective association, this study discussion will only focus on the results linked to the stated hypothesis.

3.2. Relationships between implicit and explicit attitudes, contextualized contact indexes and general contact

Correlation analysis regarding the key variables in this study only support two of the eight formulated hypothesis: H1 and H2.

In fact, in what concerns hypothesis H1, a divergence exists between implicit and explicit attitudes (DA-IAT and ATDP-O outcome variables, respectively), as commonly found in the literature, including the specific outgroup in appreciation in the present work: the ATDP-O mean score is significantly above the neutral point of the scale ($t_{(48)}$= 6,460; p<0,05; **Table 4.2.**), hence indicating positive explicit attitudes towards P**W**ID among the professionals in the sample, whereas the mean D-score revealed to be significantly below the 0 "neutral" point ($t_{(48)}$=-17,705; p<0,05; **Table 4.1.**), thus revealing the sample overall negative implicit attitudes against P**W**ID, as predicted.

Table 4.8. *Correlation coefficients between implicit and explicit attitudes, contextualized contact indexes and general contact variables.*

Measure		**Implicit Attitudes**	**Explicit Attitudes**	**Contextualized Contact**		**General Contact**	
		DA-IAT	ATDP-O	Amount Index	Quality Index	CDP	Years working with PWID
Implicit Attitudes	DA-IAT	----					
Explicit Attitudes	ATDP-O	0,061	----				
Contextualized Contact	Amount Index	-0,035	-0,034	----			
	Quality Index	-0,181	-0,033	0,801**	----		
General Contact	CDP	0,093	0,134	0,474**	0,415**	----	
	Years working with PWID	-0,139	-0,180	0,329*	0,150	0,124	----

***** Correlation is significant at the 0,05 level (2-tailed).
****** Correlation is significant at the 0,01 level (2-tailed).
N= 49

Following this first result, the analysis of **table 4.8** shows the existence of a positive and very weak correlation between DA-IAT and ATDP-O scores (r_s=0,061), which is also not statistically significant, as hypothesised (H2), and as frequently observed in similar research, generally indicating that both attitude types are weakly or not associated.

Hypothesis H3 and H4 are not supported by the obtained results, as the correlations between CPD and both attitude measures are not significant, albeit positive and weak (r_s= 0,093, and r_s= 0,134, respectively); these results suggest that the higher the amount of general contact, the more positive implicit and explicit attitudes. Yet, no statistical evidence exists supporting the claim that they are associated.

Surprisingly, the associations with contact amount and quality indexes are also very weak, although negative, either in what concerns explicit attitudes (r_s=-0,034, and r_s=-0,033, respectively), or implicit attitudes (r_s=-0,035, and r_s=-0,181, respectively). However, as these correlational values are indicative of very weak and non-significant associations between explicit attitudes and the amount and quality of contact ratings, it may be stated that these variables are not associated; the same can be said in what concerns the relationship between implicit attitudes and the amount of contact index. Yet, in what regards the association between the implicit measure and the quality of contact index, the relationship is somewhat stronger, albeit weak and in the same direction as the others; however, this result is not significant either.

The number of years working with P**W**ID (which can be considered as an "extra" direct contact indicator) association with implicit attitudes (r= -0,139), and explicit attitudes (r_s= -0,180), is negative, very weak, and also not significantly correlated neither with the implicit or explicit measures.

Hence, in face of these results, *hypothesis H5 to H8 are not supported*.

As to what concerns the direct contact variables, it is also important to stress, in the one hand, the positive, strong and significant association between the indexes of amount and quality of contact (r_s=0,801; p<.01), and, on the other, the moderate, positive and significant correlations between CDP and the amount of contact index (r_s=0,474; p<.01), and quality of contact index (r_s=0,415; p<.01). This latter pair of associations suggests convergent validity of the contextualized contact computed indexes, especially given the reliability of the CDP in the present sample.

The correlation between the number of years working with P**W**ID and the amount of contact index is weak (r_s= 0,329; p<.05), yet significant, contrarily to what can be observed regarding the association of the quality of contact index with this contact variable: it is weak and non-significant (r_s=0,150), which can be explained by the different nature of the variables, as the number of years working with P**W**ID, is a "pure amount of contact" variable, much different from quality ratings regarding that contact, and much more similar to the amount of contact index. In this sense, CPD was also anticipated to be somewhat more strongly associated with this variable (r_s= 0,124) given some data associating this instrument to the number of years of rehabilitation practice (r=0,29; e.g. Geskie, 1985; cited in Yuker & Hurley, 1987); however, it is also a positive relationship, thus following this result to a certain extent.

Finally, the associations between the key variables and the more contacted PWID age in each relationship type were explored (**table 4.9.**). Generally, correlations between the most contacted co-worker age and these variables are either positive or negative, very weak to weak and non-significant. The same correlational pattern is observed in the associations between client's and friend's age and key variables. Yet, concerning the family member's age, it is revealed a negative and moderate relationship with DA-IAT scores (r_s=-0,405), and a negative "weak-to-moderate" relationship with ATDP-O scores (r_s=-0,397).

Globally, these results seem to suggest that this demographic feature of the most contacted PWID in each contextualized setting is not an important variable, even when considering the correlations of moderate magnitude, especially because none of the results is significant, and thus impeding to affirm that they are in fact correlated; these results may also be due to the relative small sample that was subject to evaluation. However, Yuker's (1988) review on the correlates of contact with P**W**ID, also showed that demographic variables, such as age, seem to be more important in initial contacts with this group, a situation not resembling any of participants' experience, as they are all engaged in extended contact with P**W**ID, independently of the context. Hence, similarly, no further considerations or discussion will be made regarding these results subset.

Table 4.9. *Correlation coefficients between implicit and explicit attitudes, contextualized contact indexes and general contact variables and the age of the more contacted co-worker, client, friend and family.*

Measure		Co-worker age	Client age	Friend age	Family member age
Implicit Attitudes	DA-IAT	0,201	0,021	-0,270	-0,405
Explicit Attitudes	ATDP-O	-0,074	-0,224	-0,115	-0,397
Contextualized Contact	Amount Index	-0,054	0,091	-0,119	0,275
	Quality Index	-0,117	0,212	0,036	0,010
General Contact	CDP	0,031	0,236	-0,176	0,021
	Years working with PWID	0,150	-0,202	-0,001	0,230

4. Discussion

"It is more difficult to break a prejudice than an atom."

Albert Einstein

The present work aims at exploring the implicit and explicit prejudice of professionals working daily with persons with impairments and disabilities, while also investigating its relationship with intergroup contact, either generally, in terms of frequency, or regarding its perceived amount and quality within the participants' sample.

The results supported two of the enunciated hypothesis, and were contrary to the other formulated predictions.

In the next sections these results will be discussed according to the literature review presented in the first part of this thesis.

4.1. Relationship between implicit and explicit attitudes towards people with impairments and disabilities

Generally, the results supporting the two first hypothesis are also commonly found in the literature: explicit measures outcomes suggest positive attitudes toward people with disabilities, while implicit measures outcomes consistently point to negative attitudes, regarding several target groups, including people with disabilities, as well as weak to no existent correlations between them (e.g. Pruett & Chan, 2006; Wilson & Scior, 2014). Arguments stating that implicit and explicit measures tap into different information stemming from different underlying processes are mainly based in the frequent observation that those are frequently not correlated (e.g. Hahn & Gawronski, *in press;* Spears & Tausch, 2015).

This observed divergence is commonly interpreted as conceptually reflecting “dual attitudes” towards the target group, as proposed by several dual process models, such as the MODE (Motivation and Opportunity as Determinants; e.g. Fazio, 2007) model or the Associative-Propositional Evaluation model (APE model; e.g. Gawronski & Bodenhausen, 2006, 2011, cited in Hahn & Gawronski, *in press;* Vezzali & Cappozza, 2011), distinguishing between processes tending to be more efficient, automatic and less amenable to intentional and conscious control (tapped by implicit measures), and more conscious and deliberative processes (captured by explicit measures).

On the other hand, Livneh (1988), has stated earlier that “People with disabilities are construed objects of ambivalence, triggering momentary, fluctuating favourable and unfavourable feelings of compassion and sympathy, but also of aversion and distaste” (p.37), while, more recently, albeit in this same sense, Dovidio and collaborators (2011) stress that prejudice and stigma are naturally ambivalent and multidimensional, whereas the affective and cognitive processes underlying their formation and change are equally complex, and may encompass both positive and negative elements linked to the same attitude object, thus reflecting different types of experiences with it throughout time (Haddock & Maio, 2015). Furthermore, by means of social learning and relevant social norms acquisition, overt, deliberated, and explicitly manifested attitudes are altered to mirror them (e.g. conscious egalitarian beliefs), as blatant manifestations of prejudice are sanctioned. The new attained egalitarian beliefs may lead, for instance, to a higher motivation of prejudice control, in order to maintain a positive social identity and self-image, for which time pressure, and especially, mechanisms of cognitive consistency, are particularly important, while giving way to more subtle forms of prejudice and discrimination (e.g. Dovidio et al., 2011; Hahn & Gawronski, *in press*; Spears & Tausch, 2015). In this sense, implicit attitudes have traditionally been considered more resistant to change, resulting from heuristic processes formed, in turn, through associative learning mechanisms, that are more prone to operate automatically and covertly in certain contextual conditions, as well as being on the origins of subtle prejudice and discrimination (Dovidio et al., 2011); however, more recent findings have shown that implicit measures are highly malleable and context dependent (e.g. Hahn & Gawronski, *in press*), while not losing its original operational features and origins in associative learning, as we will refer to bellow.

Additionally, building on Gaertner and Dovidio’s aversive racism theory assumptions, which in turn were built on Katz’s work on ambivalence-amplification framework (Dovidio et al., 2011), and transposing them to a conceptualization of prejudice and discrimination against people with disabilities compatible with a dual process of attitudes perspective, Deal (2007) proposes the designation of “aversive disablism” to refer to the specific processes underlying P**W**ID prejudice and discrimination: people without disabilities will openly adopt unprejudiced behaviours, based in honest egalitarian beliefs, but will engage in subtle discrimination when their behaviour can be explained by any other variable but outgroup member disability status.

This dual process models of attitudes hence clearly encompass these ambivalent attitudes integrative perspectives, as well as the results obtained in the present work.

4.2. Relationship between implicit and explicit attitudes and general and contextualized contact variables

As already stated, none of the predicted relationships regarding CPD, and the other contact variables relationships with implicit and explicit attitudes were supported. The correlations of implicit and explicit attitudes with CDP correlations are (very) weak and not significant. Moreover, the correlation of explicit attitudes with CDP is within the range of data obtained by this contact scale authors (Yuker & Block, 1987) in the paper presenting this instrument, and is a bit higher than the median correlation obtained (Median=0,10). These authors also reported negative associations between the CDP and explicit attitudes and state that data suggests that the relationship between contact as measured by the CDP, and attitudes, as measured by the ATDP scales, depends on the composition of the sample, given that, as with the sample evaluated in the present work, sample homogeneity influenced results. In addition, explicit attitudes have very weak and non-significant correlations with both the amount and quality indexes, as well as with the number of years working in the centre, which is unexpected, especially given the meta-analytic data obtained by Pettigrew and Tropp (2006), undeniably and significantly associating contact with lower levels of explicit prejudice, even in unstructured contexts, such as the one where data was collected.

These unexpected results may well be related to sample features, that rend it too homogenous, as participants are all professionals working in the (re)habilitation area, with daily contact with the target group; in fact, the mean contact score as measured by the CDP is significantly above a more moderate level of contact. Furthermore, the distribution of participants through different contextualized contact settings is disproportionate: most report contact within professional relationships with P**W**ID (clients and co-workers), while only a smaller proportion of these also maintaining extra-professional relationships with friends and/or family members with impairments and disabilities. Hence, the results may have also been influenced by the creation of the amount and quality indexes in the reported procedure, which may be more significant as the sample size is modest. In addition, it is also possible that CDP, as well as the amount and quality of contact indexes results, as well as answers to the other instruments, especially ATDP-O, reflect strategic responding to some degree (e.g. social desirability effect).

Interestingly, when analysing the number of years working with P**W**ID (which is a very straightforward indicator of direct contact - and immune to strategic responding), associations with implicit and explicit attitudes, one states that, for both, and contrarily to the respective associations of these attitudes with the CDP, the association is negative, and stronger, suggesting that the more experienced the professional (as well as older), the more negative (or less positive) the implicit and explicit prejudice (the significant association between ATDP-O and the number of years working in the centre, can thus be interpreted in the same fashion). This result is in line with the recent results obtained by Wilson and Scior (2015). These authors observed that, contrarily to the hypothesized, implicit attitudes did not vary according to contact frequency; nevertheless, an interesting pattern emerged, suggesting that as contact amount increased, implicit attitudes became more positive, up to a point of daily contact, where they were more negative, and closer to those expressed by individuals with no, or infrequent contact with P**W**ID.

Several factors may contribute to the result observed in the present sample of professionals, and may especially encompass the affective predictor variables to which we alluded regarding negative prejudice, namely anxiety. In this sense, research has already documented that professional carers of individuals with impairments and disabilities frequently experience high levels of stress and strain (e.g. Martins, Cunha, Guerreiro, & Marques, 2015), and hence, it is quite possible that several contextual, professional, and P**W**ID's associated factors contribute to the participants' anxiety maintenance throughout time, hindering positive contact from arising frequently. As previously stated, many of the professionals in the sample contact mostly with clients with multi-impairments and disabilities, with whom communication is often difficult, and who may present challenging behaviours, such as auto and/or hetero-aggression, while also presenting a functional profile linked to high levels of dependence and low autonomy.

In addition, after job acceptance, contact with P**W**ID in the professional setting, especially with clients, may be considered as involuntary, while job changing, or contact avoidance, may not be a viable option as solutions to reduce anxiety; some P**W**ID related features may be relevant, such as perceived severity regarding disability and respective intervention possibilities and its outcomes range (e.g. Livneh, 2012; Yuker, 1988). These specific features may then set the stage to contacts centred in the disability status of the P**W**ID, while often marked by anxiety and, ultimately, to least than positive contacts with P**W**ID occurring more frequently than effectively positive interactions. Moreover, it is not expected to find the optimal conditions defined by Allport in client-professional relationships; in such a setting, where clients have very low levels of autonomy and independence (that to some extent arise from their functional profile), vertical relationships are the rule, rather than an exception, with professionals assuming the more elevated status in the interaction, as in most traditional educational settings; common goals and cooperation are also left out of the equation then, and authority is probably supportive of client-professional interactions in these terms (e.g. Yuker, 1988).

Hence, in such an "sub-optimal" unstructured setting, it is possible that increased and extended membership salience in such context throughout time backfires in the sense of reinforcing negative stereotypes and attitudes (either implicit or explicit); the (proto)typical outgroup member (or category exemplar) is perceived as a very dependent, and severely disabled and impaired person (i.e. outgroup salience is based mainly in negative stereotypical traits), demanding considerable intervention efforts, which may impose significant psychological and physical strain, and thus enhancing the perceived commonalities between one self and own ingroup features, as well as the uniqueness of its members, while maximizing the differences between these and the outgroup members' traits (P**W**ID), and perceptions of homogeneity within the outgroup. Therefore, in the professional context where participants work, the repeated interactions with P**W**ID mostly activate negative stereotype traits, thus leading to the use and reinforcement of heuristics that, in turn, steer stronger, and more (automatically) accessible negative attitudes (maybe even in a chronic fashion), that then become generalized, guiding subsequent contacts with P**W**ID group members, especially if anxiety is present. Therefore, as anxiety naturally leads to a reduction in the cognitive and perceptual focus, it also renders deliberate and propositional processes more difficult and effortful, thus more probably allowing associative and automatic processes based in heuristics to guide information processing, the activation of the more relevant accessible associations in memory (Brown & Hewstone, 2005), as well as more spontaneous behaviour expression. Of course, more deliberative processes also occur; however, for such, both opportunity (absence of time constraints), motivation (to control prejudice), as well as cognitive consistency are important factors influencing its operation, instead of more automatic processes, and those may be hampered by other variables such as heightened anxiety which is difficult to control (e.g Hahn & Gawronski, *in press*; Spears & Tausch, 2015).

Moreover, positive interactions within at least some of Allport's optimal conditions, as is the case of expectedly more horizontal contacts between the professionals in the sample and co-workers with impairments and disabilities (while also common goals and cooperation may be present to some extent, as well as authority support), as well as with friends with impairments and disabilities may not be enough to generalize its positive effects and altering the negative attitudes against P**W**ID (when regarded as a superordinate category). Group membership salience during contacts with these co-workers (or friends) may not influence the relationship between contact and attitudes because the counter-stereotypical traits possessed by these persons (e.g. leading an independent and autonomous life, holding a job, someone with whom some degree of intimacy is shared) pertain to someone that, regarding the more prevalent P**W**ID prototype (e.g. dependent, in need of constant assistance, with whom communication is difficult) is not a good fit to it, even if intergroup differentiation is present and acknowledged; thus, the positive contact effects with these outgroup elements are not generalized to the superordinate category, possibly due to the creation of sub-types within it, based in the knowledge of these persons with impairments and disabilities that somehow escape the more prevalent (negative) stereotypical constellation, as exceptions to those standards (while being a minority when compared to clients with impairments and disabilities can also affect the ratio between amount of positive and negative contact; Brown & Hewstone, 2005).

Such a perspective is compatible with a dual process of attitudes perspective, as well as with theoretical accounts of implicit measures permeability to contexts as Gawronski, Rydell, Vervliet, and De Houwer (2010; cited by Hahn & Gawronski, *in press*) propose in their integrative framework between representational and constructivist theoretical perspectives on attitude formation and change regarding the relative (in)stability of representations in memory. However, as any of these associations are significant, no definite conclusions can be drawn from these results because they lack statistical evidence.

4.3. Limitations

As commonly observed in research, this study also presents some limitations, at different levels.

First, concerning the methodological aspects of one of the main instruments used – the DA-IAT – more extensive evaluation of target-category labelling and respective stimuli adequacy, as well as of the instrument in itself was necessary desirable, in order to create the most reliable possible instrument; for this it would have been important to pre-test the instrument with a much larger sample, and to further analyse the mean latencies linked both to each stimuli exemplar and as a group as well, taking into consideration the average latencies yielded by each pair of critical blocks (3 and 4, and 6 and 7). Also, the adaptations introduced to the ATDP-O, as well as the translation and adaptation of the CDP to Portuguese would have benefitted from pre-tests with bigger samples to enhance its psychometric properties, especially in what concerns ATDP-O, which reliability analysis yielded a weaker result than the desirable.

Regarding the main study sample, despite valuably comprising a considerable number of specialized professionals, it still is a convenience sample, with a limited dimension, that may have hindered some instruments psychometric properties, and, to some extent, biased results. Furthermore, for this reason, the study design should have introduced a control group to compare results and extract more accurate conclusions, especially given that the room where participants were evaluated was far from being neutral, as it was located in the centre they worked in, which may have contributed to heightened accessibility of the relevant attitude-associations in memory, even if special care was taken to detract priming processes from occurring.

Additionally, the present work also suffers from a common caveat of literature on the study of implicit and explicit attitudes: the absence of these attitudes behavioural consequences evaluation, i.e., for instance, if any relationship exists between negative implicit and explicit attitudes and discriminatory behaviour.

4.4. Future Directions

The intergroup contact theory still has not extensively reached out to the exploration of the relationship between intergroup contact and implicit attitudes, and its effects on prejudice. Moreover, still not much is yet known on the negative factors that can hinder explicit and implicit prejudice reduction, especially in the case of disability groups. Also important is to explore group membership salience as a moderator between contact and attitudes in the particular domain of disability, and the contextual conditions that may elevate it to a point it can actually backfire and enhance anxiety and intergroup threat instead of reducing it, thus eventually leading to even more negative prejudice. In addition, given the high complexity and variety of the potential outgroup exemplars and disability types abridged by the umbrella definition of "disability", investigating group saliency operationalized as "perceived typicality", should lend a new perspective on the traditionally found disability hierarchy, while helping uncover common stigmatizing features, as well as those particular to each disability type.

5. Conclusions

This work ambitioned to contribute with relevant data to an investigation domain where implicit prejudice towards people with disabilities, and its relationship with contact is still underexplored, especially in the case of professionals working daily with this population, given the potential detrimental impact of their interventions in these people's lives if guided by (relatively) unconscious, uncontrollably activated prejudice.

The obtained results show that we still have not completely understood the relationship between direct contact and attitudes, especially the role assumed by negative affective and contextual factors preventing prejudice reduction (as several authors have also pointed out), given that the present work was conducted in an unstructured setting, with professionals contacting daily with people with disabilities, and where, nevertheless, negative prejudice is present, while contact is not associated with either implicit or explicit attitudes.

It is extremely important to pursue investigation regarding both implicit and explicit attitudes towards persons with impairments and disabilities, as well as their relationship with direct contact and further intergroup contact theory developments regarding extended and imagined contact, and also other relevant correlates, such as motivation to control prejudice and group saliency, as fundamental foundations underlying, for instance, policy making, interventions for prejudice reduction and pre-professionals training curricula. Ultimately, research may then significantly contribute to the enhancement of people with impairments and disabilities health, well-being and quality of life.

References

Abrams, D., Crisp, R. J., Marques, S., Fagg, E., Bedford, L., & Provias, D. (2008). Threat inoculation: experienced and imagined intergenerational contact prevents stereotype threat effects on older people's math performance. *Psychology and Aging*, 23(4), 934–9. doi:10.1037/a0014293

Antonak, R. F., & Livneh, H. (2000). Measurement of attitudes toward persons with disabilities. *Disability and Rehabilitation, 22* (5), 211-224.

Banaji, M. R., & Greenwald, A. G. (2013). *Blindspot: Hidden Biases of Good People*. New York: Delacorte Press [Kindle Version].

Bargh, J. A., Chaiken, S., Govender, R., & Pratto, F. (1992). The generality of the automatic attitude activation effect. *Journal of Personality and Social Psychology, 62*(6), 893–912.

Barnes, C., & Mercer,G. (2011a). *Disability*. Cambridge: Polity Press.

Barnes, C., & Mercer, G. (2011b). *Exploring Disability* (2nd. Ed.). Cambridge, UK: Polity.

Baron, A. S., & Banaji, M. R. (2006). The development of Implicit Attitudes – Evidence of race evaluations from ages 6 and 10 and adulthood. *Psychological Science, 17* (1), pp. 53-58.

Bohner, G., & Dickel, N. (2011). Attitudes and Attitude Change. Annual Review of Psychology, 62, 391–417.

Brazão, P., & Garcia-Marques, T. (2004). Valência de atributos pessoais e estereotipicalidade em relação aos skinheads. *Laboratório de Psicologia, 2*(1), 21–32. doi:10.14417/lp.775

Brown, R., & Hewstone, M. (2005). An integrative theory of intergroup contact. Advances in *Experimental Social Psychology, 37*, 255–343. doi:10.1016/S0065-2601(05)37005-5.

Centro de Estudos Sociais (2010). *Estudo de Avaliação do Impacto dos Custos Financeiros e Sociais da Deficiência – Relatório Final*. Coimbra: Centro de Estudos Sociais – Laboratório Associado da Faculdade de Economia da Universidade de Coimbra.

Centro de Reabilitação Profissional de Gaia & Instituto Superior de Ciências do Trabalho e da Empresa (2007a). *Elementos de Caracterização das Pessoas com Deficiências e Incapacidades em Portugal*. Vila Nova de Gaia: Centro de Reabilitação Profissional de Gaia.

Centro de Reabilitação Profissional de Gaia & Instituto Superior de Ciências do Trabalho e da Empresa (2007b). *Mais Qualidade de Vida para as Pessoas com Deficiências e Incapacidades – Uma Estratégia para Portugal*. Vila Nova de Gaia: Centro de Reabilitação Profissional de Gaia.

Centro de Reabilitação Profissional de Gaia & Instituto Superior de Ciências do Trabalho e da Empresa (2007c). *Enhancing the Quality of Life of People with Disabilities – A Strategy for Portugal*. Vila Nova de Gaia: Centro de Reabilitação Profissional de Gaia.

Chan, C., Lee, T., Yuen, H., & Chan, F. (2002). Attitudes towards people with disabilities between Chinese rehabilitation and business students: An implication for practice. *Rehabilitation Psychology, 47*(3), 324-338.

Chan, F., Livneh, H., Pruett, S., Wang, C., & Zheng, L. X. (2009). Societal attitudes toward disability: Concepts, measurements, and interventions. In F. Chan, E. S. Cardoso, & J. A. Chronister (Eds.), *Understanding Psychosocial Adjustment to Chronic Ilness and Disability: A Handbook for Evidence-Based Practitioners in Rehabilitation*. New York: Springer Publishing Company.

Chen, R., Brodwin, M., Cardoso, E., & Chan, F. (2002). Attitudes toward people with disabilities in the social context of dating and marriage: A comparison of American, Taiwanese, and Singaporean college students. *Journal of Rehabilitation, 68*(4), 5–11.

Chubon, R. A. (1982). An analysis of research dealing with the attitudes of professionals toward disability. *Journal of Rehabilitation, 48*(1), 25-30.

Clarke, N. E., & Crewe, N. M. (2000). Stakeholder attitudes toward ADA Title I: Development of an indirect measurement method. *Rehabilitation Counselling Bulletin, 43*(2), 58–65.

Council of Europe (n.d.). Disability and disabilism. *Compass: Manual for Human Rights Education with Young people*. Retrieved from http://www.coe.int/en/web/compass/disability-and-disablism, in 06/01/2016.

Deal, M. (2007). Aversive disablism: subtle prejudice toward disabled people. *Disability & Society, 22*(1), 93–107. doi:10.1080/09687590601056667

De Houwer, J., & Moors, A. (2010). Implicit Measures: Similarities and Differences. In, In, B. Gawronski, & B. K. Payne (Eds.), *Handbook of Implicit Social Cognition – Measurement, Theory, and Applications*. New York: The Guilford Press.

Organização Mundial de Saúde & Direção-Geral da Saúde (2004). Classificação Internacional de Funcionalidade, Incapacidade e Saúde. Lisboa: OMS & DGS.

Disability Rights Promotion International - Portugal (2012). *Relatório Final*. Lisboa: Instituto Superior de Ciências Sociais e Políticas.

Dovidio, J. F., Pagotto,L., & Hebl, M. R. (2011). Implicit attitudes and discrimination against people with physical disabilities, in Wiener, R., & Willborn, S. L. (Eds.) *Disability and Aging Discrimination: Perspectives in Law and Psychology* (pp. 157-183). New York: Springer Science + Business Media.

Dunn, D. S. (2010). The social psychology of disability. In, R. G. Frank, M. Rosenthal, & B. Caplan (Eds.), *Handbook of Rehabilitation Psychology* (2.nd Ed.; pp. 379-390). Washington, D.C.: American Psychological Association.

Dunn, D. S. (2015). *The Social Psychology of Disability*. Oxford: Oxford University Press

Eagly, A. H., & Chaiken, S. (2007). The advantages of an inclusive definition of attitude. Social Cognition, 25(5), 582-602.

Emerson, E., Madden, R., Graham, H., Llewellyn, G., Hatton, C., & Robertson, J. (2011). The health of disabled people and the social determinants of health. *Public Health*, *125*, 145-147.

Enea-Drapeau, C., Carlier, M., & Huguet, P. (2012). Tracking subtle stereotypes of children with trisomy 21: from facial-feature-based to implicit stereotyping. *PloS One, 7*(4), 1-6.

Eurofund (2013). *Third European Quality of Life Survey – Quality of Life in Europe: Social Inequalities*. Luxembourg: Publications Office of the European Union.

European Commission Communication No. 636, European Disability Strategy 2010-2020: A Renewed Commitment to a Barrier-Free Europe (2010). Retrieved from http://ec.europa.eu/justice/contract/files/common_sales_law/communication_sales_law_en.pdf, in 15/01/2014.

European Disability Forum (n/d). Facts and figures about disability. Retrieved from http://www.edf-feph.org/Page_Generale.asp?DocID=12534&id=1&langue=EN, in 20/05/2014.

European Foundation Centre (2012). *Estudo de Avaliação do Impacto dos Planos de Austeridade dos Governos Europeus sobre os Direitos das Pessoas com Deficiência – Sumário dos resultados*. Brussels: European Foundation Centre.

European Union Agency for Fundamental Rights (2013). *Inequalities and multiple discrimination in access to and quality of healthcare*. Luxembourg: Publications Office of the European Union.

Fazio, R. H. (2007). Attitudes as object-evaluation associations of varying strength. *Social Cognition, 25*(5), pp. 603-637.

Fazio, R. H., & Olson, M. A. (2003). Implicit measures in social cognition research: their meaning and use. Annual Review of Psychology, 54, 297–327.

Field, A. (2011). *Discovering Statistics using SPSS* (3rd Ed.). London: SAGE Publications.

Fiske, S. T. (2010). *Social Beings: Core Motives in Social Psychology* (2nd Ed.). Hoboken: Wiley.

Foroni, F., & Bel-Bahar, T. (2009). Picture-IAT versus Word-IAT: Level of stimulus representation influences on the IAT. *European Journal of Social Psychology*, *40*, 321–337. doi:10.1002/ejsp.626

French, S. (1996). The attitudes of health professionals towards disabled people. In G. Hales (Ed.), *Beyond Disability: Towards an Enabling Society*. London: Sage Publications.

Freyhoff, G., et al. (n.d.). *The Specific Risks of Discrimination against Persons in Situation of Major Dependence or with Complex Needs* (V.1)*: Policy Recommendations*. European Commission: Inclusion Europe.

Gawronski, B. (2007). Editorial: Attitudes can be measured! But what is an attitude? *Social Cognition, 25*(5), 573-581.

Gawronski, B., & Bodenhausen, G. V. (2007). What do we know about implicit measures and what do we have to learn? In B. Wittenbrink, & N. Schwarz (Eds.), *Implicit Measures of Attitudes* (pp. 265-286). New York: The Guilford Press.

Gething, L., LaCour, J., & Wheeler, B. (1994). Attitudes of nursing home administrators and nurses towards people with disabilities. *Journal of Rehabilitation, 60*(4),66-70.

Gonçalves, C. (2003). Enquadramento familiar das pessoas com deficiência: Uma análise exploratória dos resultados dos Censos 2001. Revista de Estudos Demográficos, 33, 69-94.

Greenwald, A. G., & Banaji, M. R. (1995). Implicit Social Cognition: Attitudes, Self-Esteem, and Stereotypes. *Psychological Review, 102*(1), 4-27. Doi: 10.1037/0033-295X.102.1.4

Greenwald, A. G., Banaji, M. R., Rudman, L. A., Farnham, S. D., Nosek, B. A., & Mellott, D. S. (2002). A unified theory of implicit attitudes, stereotypes, self-esteem, and self-concept. *Psychological Review, 109*(1), 3–25. https://doi.org/10.1037/0033-295X.109.1.3

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring Individual Differences in Implicit Cognition: The Implicit Association Test. *Journal of Personality and Social Psychology*, *74*(6), 1464-1480. doi: 10.1037/0022-3514.74.6.1464

Greenwald, A. G., Nosek, B. a., & Banaji, M. R. (2003). Understanding and using the Implicit Association Test: I. An improved scoring algorithm. *Journal of Personality and Social Psychology, 85*(2), 197–216. doi:10.1037/0022-3514.85.2.197

Haddock, G., & Maio, G. (2015). Attitudes. In, M. Hewstone, W. Stroebe, & K. Jonas (Eds.), *An Introduction to Social Psychology* (6th Ed.). Chichester, West Sussex: Wiley.

Hahn, A., & Gawronski, B. (in press). Implicit social cognition. In J. T. Wixted (Ed.), *The Stevens' handbook of experimental psychology and cognitive neuroscience* (4th ed.). Malden, MA: Wiley. Retrieved from http://bertramgawronski.com/documents/HG_StevensHandbook.pdf, in 05/11/2016.

Hein, S., Grumm, M., & Fingerle, M. (2011). Is contact with people with disabilities a guarantee for positive implicit and explicit attitudes? *European Journal of Special Needs Education*, *26*(4), 509–522.

Hewstone, M., & Swart, H. (2011). Fifty-odd years of inter-group contact: From hypothesis to integrated theory. *British Journal of Social Psychology, 50*(3), 374–386. http://doi.org/10.1111/j.2044-8309.2011.02047.x

Hofmann, W., Gschwendner, T., Nosek, B. a., & Schmitt, M. (2005). What moderates implicit—explicit consistency? *European Review of Social Psychology* (Vol. 16), 335-390.

Hornstra, L., Denessen, E., Bakker, J., van den Bergh, L., & Voeten, M. (2010). Teacher attitudes toward Dyslexia: Effects on teacher expectations and the academic achievement of students with dyslexia. *Journal of Learning Disabilities, 43*(6), 515–529.

IBM® SPSS® Statistics for Windows Version 20.0 [Computer Software]. (2011). Armonk, New York: IBM Corp.

Inquisit 3.0.2.0 [Computer software]. (2008). Copyright © 2008 Millisecond Software. Seattle, WA: Millisecond Software LLC.

Instituto Nacional de Estatística (2012a). Censos 2011 – Resultados Definitivos. *Destaque – Informação à Comunicação Social*. Retrieved from http://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_destaques&DESTAQUESdest_boui=107624784&DESTAQUEStema=55466&DESTAQUESmodo=2 , in 22/02/2012.

Instituto Nacional de Estatística (2012b). Dia Internacional das Pessoas com Deficiência – 3 de Dezembro - Saúde e incapacidades. *Destaque – Informação à Comunicação Social*. Retrieved from http://www.ine.pt/xportal/xmain?PORTLET_ID=JSP&xpid=INE&PORTLET_UID=%23JSP%3Aine_cont_header_dest%23&PORTLET_NAME=ine_cont_header_dest&xpgid=ine_destaques&DESTAQUEStema=55466&DESTAQUESdata_inicial=&DESTAQUESdata_final=&x=0&y=0&DESTAQUESfreeText=defici%C3%AAncia , in 22/02/2012.

Lane, K. A., Banaji, M. R., Nosek, B. A., & Greenwald, A. G. (2007). Understanding and Using the Implicit Association Test: IV. What We Know (So Far) about the Method. In B. Wittenbrink, & N. Schwarz (Eds.), *Implicit Measures of Attitudes* (pp. 59-102). New York: The Guilford Press.

Lima, M. L., & Correia, I. (2013). Atitudes: Medida, estrutura e funções. In J. Vala & B. Monteiro (Coord.), *Psicologia Social* (9th Ed.). Lisboa: Fundação Calouste Gulbenkian.

Livneh, H. (2012). On the Origins of Negative Attitudes toward People with Disabilities. in, I. Marini, & M. A. Stebnicki (Eds.), *The Psychological and Social Impact of Illness and Disability* (6th Ed.; 13-26). New York: Springer Publishing Company.

Livneh, H. (1988). A Dimensional Perspective on the Origin of Negative Attitudes toward Persons with Disabilities. In, H. E. Yuker (Ed.), *Attitudes toward Persons with Disabilities* (pp. 35-47). New York: Springer Publishing Company.

Lyons, M. (1991). Enabling or disabling? Students' attitudes toward persons with disabilities. *American Journal of Occupational Therapy, 45* (4), 311-316.

Martins, L., Cunha, M. Guerreiro, D., & Marques, M. (2015). Correlatos psicológicos de cuidadores formais de pessoas com deficiência mental: amostra portuguesa [Psychological correlates of formal carers of people with intelectual disability: a Portuguese sample]. *Portuguese Journal of Behavioral and Social Research, 1*(1), pp. 17-29.

Martins, A. C., & Pais-Ribeiro, J. L. (2007). *Estudo de Adaptação do Questionário Atitudes em Relação às Pessoas com Incapacidade (Versão portuguesa da ATDP-0).* Poster presented at the X Congresso Internacional e Multidisciplinar do Centro de Psicopedagogia: Igualdade para Todos, Contributos da Educação e da Psicologia.

Martins, A. C. (2008). *Indicadores da Qualidade de Vida nas Pessoas Utilizadoras de Cadeira de Rodas: Uma análise exploratória dos hábitos de vida, características psicológicas, clínicas, sociodemográficas e relacionadas com tecnologias de apoio*. Unpublished doctoral dissertation, Faculdade de Psicologia e de Ciências da Educação, Universidade do Porto, Porto, Portugal. [retrieved from http://hdl.handle.net/10216/22946]

McCaughey, T. J., & Strohmer, D. C. (2005). Prototypes as an indirect measure of attitudes toward disability groups. *Rehabilitation Counseling Bulletin, 48*(2), 89-99.

National Disability Authority (NDA; 2007). *Literature Review on Attitudes Towards Disability*. NDA: Dublin. Retrieved from http://nda.ie/Publications/Attitudes/Literature-Review-of-International-Evidence-on-Attitudes-to-Disability/ , in 05/09/2012.

Nosek, B. A., Banaji, M. R., & Greenwald, A. G. (2002). Harvesting implicit group attitudes and beliefs from a demonstration website. *Group Dynamics, 6*, 101–115.

Nosek, B. A., Greenwald, A. G., & Banaji, M. (2007a). The Implicit Association Test at age 7: A methodological and conceptual review. In, J. A. Bargh (Ed.), *Automatic Processes in Social Thinking and Behavior*. Psychology Press.

Nosek, B. A., Smyth, F. L., Hansen, J. J., Devos, T., Lindner, N. M., Ranganath, K. A., Smith, C. T., Olson, K. R., Chugh, D., Greenwald, A. G., & Banaji, M. R. (2007b). Pervasiveness and correlates of implicit attitudes and stereotypes. *European Review of Social Psychology*, *18*, 36-88. Retrieved from Project Implicit's website: https://www.projectimplicit.net/stimuli.html, in 25/07/2011.

Nosek, B. A., Smyth, F. L., Hansen, J. J., Devos, T., Lindner, N. M., Ratliff (Ranganath), K. A., Smith, C. T., Olson, K. R., Chugh, D., Greenwald, A. G., & Banaji, M. R. (2007). Pervasiveness and correlates of implicit attitudes and stereotypes. *European Review of Social Psychology*, 18, 36-88.

Nosek, M. (2010). Women's experience of disability. In, R. G. Frank, M. Rosenthal, & B. Caplan (Eds.), *Handbook of Rehabilitation Psychology* (2nd Ed.). Washington, DC: American Psychological Association.

Nelson, T. D. (2006). Trends and unanswered questions in prejudice research. in, T. D. Nelson, *The Psychology of Prejudice* (2nd Ed.). Boston: Pearson Education, Inc..

Payne, B. K., & Gawronski, B. (2010). A History of implicit social cognition – Where is it coming from? Where is it now? Where is it going? In, B. Gawronski, & B. K. Payne (Eds.), *Handbook of Implicit Social Cognition – Measurement, Theory, and Applications*. New York: The Guilford Press.

Pendry, L. (2015). Social cognition. In, M. Hewstone, W. Stroebe, & K. Jonas (Eds.), *An Introduction to Social Psychology* (6th Ed.). Chichester, West Sussex: Wiley.

Pessoa, Fernando (2001). Letter from a Hunchback Girl to the Metalworker, in R. Zenith (Ed./Translator), *The Selected Prose of Fernando Pessoa*. New York: Grove Press. [Kindle Edition].

Pettigrew, T. F. (1998). Intergroup contact theory. *Annual Review of Psychology*, 49, 65-85.

Pettigrew, T. F. (2008). Future directions for intergroup contact theory and research. *International Journal of Intercultural Relations, 32*, 187-199.

Pettigrew, T. F., & Tropp, L. R. (2005). Allport's intergroup contact hypothesis: its history and influence. In, J. F. Dovidio, F. John, P. Glick, & L. A. Rudman (Eds.), *On the nature of prejudice: Fifty years after Allport*. Malden: Blackwell Publishing.

Pettigrew, T. F., & Tropp, L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal of Social Psychology, 38*, 922-934.

Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90*(5), 751–783. https://doi.org/10.1037/0022-3514.90.5.751

Pettigrew, T. F., Tropp, L. R., Wagner, U., & Christ, O. (2011). Recent advances in intergroup contact theory. *International Journal of Intercultural Relations*, *35*, 271-280.

Pruett, S. R., & Chan, F. (2006). The development and psychometric validation of the disability attitude implicit association test. *Rehabilitation Psychology, 51* (3), 202-213.

Pruett, S. R., Lee, E. J., Chan, F., Wang, M. H., & Lane, F. J. (2008). Dimensionality of the contact with disabled persons scale: Results from exploratory and confirmatory factor analyses. *Rehabilitation Counseling Bulletin, 51*(4), 210-220.

Qualtrics Research Suite [Computer software]. (2014). Copyright © 2014 Qualtrics. Provo, UT: Qualtrics. Available at: http://www.qualtrics.com

Robey, K. L., Beckley, L., & Kirschner, M. (2006). Implicit infantilizing attitudes about disability. *Journal of Developmental and Physical Disabilities, 18*(4), 441-453.

Rui Machado (2014, January 20). Sr. Silva, há mais gente que merece e aguarda reconhecimento [*There are more people waiting for the acknowledgement they deserve, Mr. Silva*; Facebook post on (d)Eficientes Indignados page]. Retrieved from https://www.facebook.com/dEficientes.Indignados/posts/691921897527325:0.

Secretariado Nacional de Reabilitação (1996). *Inquérito Nacional às Incapacidades, Deficiências e Desvantagens: Síntese dos Resultados Globais*. Retrieved from http://www.inr.pt/content/1/111/cadernos-snr, in 19/10/2012.

Schwartz, N., & Bohner, G. (2001). The construction of attitudes. In, A. Tesser, & N. Schwarz (Eds.), *Blackwell Handbook of Social Psychology: Intraindividual Processes*. Malden, Massachusetts, USA: Blackwell Publishers Inc.. [electronic edition]. DOI: 10.1002/9780470998519

Spears, R., & Tausch, N. (2015). Prejudice and intergroup relations. In, M. Hewstone, W. Stroebe, & K. Jonas (Eds.), *An Introduction to Social Psychology* (6th Ed.). Chichester, West Sussex: Wiley.

Stangor, C. (2009). The Study of Stereotyping, Prejudice, and Discrimination Within Social Psychology: A Quick History of Theory and Research. In, T. D. Nelson (Ed.), *Handbook of Prejudice, Stereotyping, and Discrimination* (pp. 1-22). New York: Psychology Press.

Teige-Mocigemba, S., Klauer, K. C., & Sherman, J. W. (2010). A practical guide to Implicit Association Tests and related tasks. In, B. Gawronski, & B. K. Payne (Eds.), *Handbook of Implicit Social Cognition – Measurement, Theory, and Applications*. New York: The Guilford Press.

Thomas, A., Doyle, A., & Vaughn, D. (2007). Implementation of a Computer Based Implicit Association Test as a Measure of Attitudes toward Individuals with Disabilities. *Journal of Rehabilitation, 73*(2), 3-14.

Thomas, A., Vaughn, E. D., Doyle, A., & Bubb, R. (2014). Implicit Association Tests of Attitudes Toward Persons With Disabilities. *The Journal of Experimental Education, 82*(2), 184–204.

Turner, R. N., Hewstone, M., Voci, A., Paolini, S., & Christ, O. (2007). Reducing prejudice via direct and extended cross-group friendship. *European Review of Social Psychology*, *18*, 212-255.

Vezzali, L., & Capozza, D. (2011). Reducing explicit and implicit prejudice toward disabled colleagues: Effects of contact and membership salience in the workplace. *Life Span and Disability, 14*(2), 139–162. Retrieved from http://www.lifespan.it/client/abstract/ENG237_4.pdf , in 05/01/2016.

Vezzali, L., & Giovannini, D. (2011). Intergroup contact and reduction of explicit and implicit prejudice toward immigrants: A study with Italian businessmen owning small and medium enterprises. *Quality and Quantity, 45*(1), 213–222. https://doi.org/10.1007/s11135-010-9366-0

White, M. J., Jackson, V., & Gordon, P. (2006). Implicit and Explicit Attitudes toward Athletes with Disabilities. *Journal of Rehabilitation, 72*(3), 33-40.

Wilson, M. C., & Scior, K. (2014). Attitudes towards individuals with disabilities as measured by the Implicit Association Test: A literature review. *Research in Developmental Disabilities, 35*(2), 294–321.

Wilson, M. C., & Scior, K. (2015). Implicit attitudes towards people with intellectual disabilities: Their relationship with explicit attitudes, social distance, emotions and contact. PLoS ONE, 10(9), 1–19. https://doi.org/10.1371/journal.pone.0137902

Wong, D. W., Chan, F., Cardoso, E., Lam, C. C., & Miller, S. (2004). Rehabilitation counselling students' attitudes toward people with disabilities in three social contexts: A conjoint analysis. Rehabilitation Counseling Bulletin, 47,194-204.

World Health Organization & The World Bank (2011). World Report on Disability. Geneva: World Health Organization. Retrieved from http://whqlibdoc.who.int/publications/2011/9789240685215_eng.pdf?ua=1 , in 19/10/2012.

Yuker, H. E. (1994). Variables that influence attitudes toward people with disabilities: Conclusion from the data. *Journal of Social Behavior and Personality, 9*(5), pp. 3-22).

Yuker, H. E. (1988). The effects of contact on attitudes toward disabled persons: Some empirical generalizations. In, H. E. Yuker (Ed.), *Attitudes toward Persons with Disabilities*. New York. Springer Publishing.

Yuker, H. E. & Block, J. R. (1986). *Research with the Attitudes towards Disabled Persons Scales (ATDP) – 1960-1985*. Hempstead, New York: Hofstra University.

Appendix A

Analysis of the operational dimensions proposed for delimitating and operationalising the concept of disability [adapted from CRPG and ISCTE (2007c, p.46)].

Operating contents	Analysis
"A person with significant limitations of activity and participation, in one or several domains of life, (…)"	• In accordance with the bio-psychosocial approach proposed by the WHO. • In accordance with the social model. • Places the emphasis at the level of the problems/ difficulties and obstacles which emerge from the interaction person-life contexts and, simultaneously, in the domain of the activity limitations.
"(…) following from the interaction between the functional and structural changes of permanent nature and the surrounding contexts, (…)"	• In accordance with the bio-psychosocial approach proposed by the WHO. • Articulates the changes of structure and function with activity limitations and participation, within the framework of the life contexts of the person. • The permanent nature, has the purpose of establishing a greater differentiating power for the target public and to increase the operationability of the concept.
"(…), resulting in prolonged difficulties of communication, learning, mobility autonomy, interpersonal relations and social participation, (…)"	• In accordance with the bio-psychosocial approach proposed by the WHO. • Explicit presentation of the main domains, considered as critical by the literature, regarding the individual's functionality.
"(…) leading to the mobilisation of services and resources in order to promote the potential for bio-psychosocial functioning."	• In accordance with the bio-psychosocial approach proposed by the WHO. • Articulates activity limitations and participation with the measures/strategies required for promoting the optimisation of the person-contexts.

Appendix B

The 30 more frequently indicated words in the pilot study (in prep) for the collection of word stimuli exemplars for the superordinate categories of PwID and PWID for the general Disability Attitude IAT, by descending order of frequency.

"Persons without Impairments and Disabilities" (PwID)[1]	**Frequency**	**"Persons With Impairments and Disabilities" (PWID)**[2]	**Frequency**
Normal/ais	38	Dificuldades	13
Trabalho	14	Dependência	11
Capazes	12	Cadeira de rodas	10
Saúde	12	Luta	10
Autonomia	10	Pena	10
Liberdade	10	Coragem	9
Livres	8	Dificuldade	9
Normalidade	8	Discriminação	9
Saudáveis	8	Limitação	8
Sorte	8	Ajuda	7
Autónomas	6	Deficiente	6
Felizes	6	Dependentes	6
Vida	6	Limitações	6
Alegria	5	Barreiras	5
Capacidade	5	Dependente	5
Facilidade	5	Obstáculos	5
Felicidade	5	Pessoas	5
Iguais	5	Deficientes	4
Independência	5	Diferença	4
Independentes	5	Difícil	4
Mobilidade	5	Infelicidade	4
Pessoas	5	Lutadoras	4
Activas	4	Medo	4
Correr	4	Problema	4
Igualdade	4	Sofrimento	4
Livre	4	Tristeza	4
Maioria	4	Adaptação	3
Sortudas	4	Apoio	3
Ajuda	3	Capazes	3
Auto-estima	3	Coitados	3

---

[1] Pessoas sem Deficiências e Incapacidades in the Portuguese original.

[2] Pessoas com Deficiências e Incapacidades in the Portuguese original.

Appendix C

Original stimuli exemplars as used in Project Implicit's (PI) Disability Attitudes IAT (Nosek et al., 2007b) and Pruett and Chan's (2006) study.

	Target Category Labels							
	Abled				**Disabled**			
Exemplars								
	Attribute Category Labels							
	Good				**Bad**			
Stimuli	Joy Love Peace Wonderful Pleasure Excellent				Evil Angry Terrible Rotten Nasty Bomb			

<u>Note:</u> *Albeit with the purpose of developing an equivalent paper and pencil IAT to the one available in PI's website, the superordinate category labels used by Pruett and Chan (2006) were different: "Disability" instead of "Disabled" and "Nondisabled" instead of "Abled".*

Appendix D

A critical analysis regarding the previously used abled/disabled/disability picture exemplars.

The subsequent critical analysis will focus on the pictograms used by Nosek and collaborators' (2007) and Pruett and Chan's (2006) in their studies regarding the Disability IAT development, as these constitute conceptual, structural and procedural references in the specific domain in which the present work has also been developed.

The original pictographic exemplars chosen to represent each of the two target categories in the Disability IAT, albeit characterized as keeping some extraneous variables away from exerting undesired influence (Pruett & Chan, 2006), such as race, gender, age, and attractiveness (hence in these conditions, its selection, use, and categorization by participants would be more easy and straightforward than photographs, while keeping concerns regarding validity and reliability – more - under control), may not be as successful in accomplishing this as intended. Moreover, several other irrelevant stimulus features that can posit problems to the task performance and results' interpretation were identified; more specifically, they may facilitate recoding processes to occur, leading to stimuli categorization upon alternative categories to the ones intended, and thus introducing unwanted variance in the outcome variable, namely: **1)** the existence of an exemplar compound by two human figures instead of one in the "Abled" target category, which is not observed in the rest of the exemplars where human figures are depicted. In addition, this image encountered no analogue in the counterpart target category. This therefore constitutes a risk as it offers an opportunity to categorize this image basing in an irrelevant feature (i.e. the participant may reason it out as pertaining to the "Abled" category not because the two persons represented do not appear to present any impairment or disability, but simply because it is the only category that includes an exemplar with two persons instead of one); **2)** this same stimulus is the only one in both sets depicting a person gendered as a girl/woman (and therefore offering the same risk as mentioned in the latter point); **3)** even if every human figure represented resembles to those used in traffic signs, not all of the exemplars in these original sets are literally included in an actual traffic sign limiting form. In addition, those that are, pertain only to the "Abled" stimuli set, which may also lead to recoding processes not related at all to the category labels as intended[1]; furthermore, three of the exemplars are actual traffic signs, present in the USA Highway Code, and hence completely unrelated with the Portuguese or European cultures or counterpart codes[2]. In this situation, there may be an eventual competition in the retrieving of the relevant information for completing the task at hands, which can preclude efficient responding, and therefore to augmented latencies; **4)** this "traffic sign-like delimitation" of the human figures may also contribute to extended response latencies, as it makes

---

[1] Although almost all pictures resemble the pictograms traditionally used in traffic signs, not all are delimited as these signs, hence introducing a possibly salient feature sensible to recoding processes.

[2] At least the first three stimuli pretending to represent the "Abled" target category belong to the Highway Code of the United States of America, more specifically to the category "warning signs".

images more complex; **5)** it seemed rather strange that a target category that should be represented by exemplars depicting “Persons with disabilities” (or “Disabled” in the original) included two stimuli that represented assistive devices, products (such as white canes or crutches) or service animals (the guide dog) that some can use, obviously depending on their functional profile. This seamed even less reasonable because the opposite target category does not include similar exemplars, calling several things into question; these stimuli can even be perceived as signalling negative bias towards the group they were intended to represent since it dehumanizes (at least some) persons with disabilities. As people are not actually objects nor animals, these original stimuli were perceived as not suitable to the target category label they intended to represent. In addition, these exemplars were equally considered inadequate as they could also raise problems from the point of view of information processing, and therefore, in the interpretation of the results: in those trials, the association between target and attribute refers to a pair of crutches, to the guide dog, or to someone who eventually uses them? Can one be confident that this IAT effectively measures implicit attitudes towards persons with disabilities in these conditions? Thereby we searched for alternative stimuli containing people using these or other type of assistive product or the support of a service animal; and, **6)** the apparent movement suggested by the exemplars representing the “abled” label encounters no echo in the counterpart exemplars, which introduces another eventual source of unwanted variance: the abled are depicted as “movement beings” – walking, running, and practising ski - while the disabled are either objects, or apparently needing for assistance in pushing the wheelchair, except for the blind person walking autonomously and independently with a cane.

Appendix E

Item-pool of pre-selected stimulus exemplars.

	Superordinate categories							
	Abled				**Disabled**			
Original DA-IAT stimuli[11]								
Pre-selected pictograms								
								
Other pictograms								
								

---

[11] As first used by Project Implicit team (Nosek, Smyth, Hansen, Devos, Lindner, Ratliff, Smith, Olson, Chugh, Greenwald, & Banaji, 2007b).

Appendix F

Paper version of the pictograms' pre-test online questionnaire.

ISCTE IUL
Escola de Ciências
Sociais e Humanas

Car@ participante,

Neste estudo pretendemos avaliar a adequabilidade de algumas imagens relativamente a determinadas categorias sociais. A sua participação é muito importante.

O questionário destina-se a todos/as aqueles/as com **idade igual ou superior a 18 anos e residentes em Portugal**. O seu preenchimento é simples e demora, aproximadamente, 15 minutos.

Este estudo está ser desenvolvido pela Dra. Ana Sofia Oliveira no Centro de Investigação e Intervenção Social do ISCTE-IUL (http://www.cis.iscte-iul.pt/), com a supervisão da Doutora Sibila Marques e do Doutor Ricardo Borges Rodrigues.

Os procedimentos e o questionário encontram-se de acordo com o Código Deontológico da Ordem dos Psicólogos Portugueses; garantem-se o anonimato e confidencialidade dos dados recolhidos, uma vez que não serão reunidas informações que o/a permitam identificar. Poderá, também, se assim o desejar, terminar a sua participação em qualquer altura fechando a janela do questionário; nesta situação, não haverá registo de quaisquer respostas que entretanto possa ter indicado.

Para quaisquer questões relativas a este estudo, contacte-nos por favor através do endereço de e-mail ana_sofia_oliveira@iscte-iul.pt (Dra. Ana Sofia Oliveira).

Agradecemos antecipadamente a sua participação.

Com os melhores cumprimentos,

Ana Sofia Oliveira
Sibila Marques
Ricardo Borges Rodrigues

ISCTE IUL
Escola de Ciências
Sociais e Humanas

Instruções

De seguida, ser-lhe-ão apresentadas várias imagens. **Para cada uma deverá indicar:**

1) a sua opinião sobre se as pessoas da sociedade portuguesa associam a imagem às categorias **"Pessoas COM Deficiências e Incapacidades"** e/ou **"Pessoas SEM Deficiências e Incapacidades"**;

2) a sua opinião sobre se as pessoas da sociedade portuguesa avaliam a imagem **positiva** ou **negativamente**.

***Não existem por isso respostas certas nem erradas*. Estamos interessados na sua opinião** *sobre a perspectiva que as pessoas da sociedade portuguesa têm de uma forma geral em relação às imagens apresentadas,* **independentemente de concordar, ou não, com essa perspectiva.**

Note, por favor, que, se pressionar o botão "Continuar" antes de responder, não poderá retroceder, podendo assim invalidar o seu questionário.

Clique, por favor, em "Continuar" para prosseguir para o preenchimento do questionário.

Bloco: Avaliação do Estímulo C1____

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **COM** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **SEM** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

De que forma é que as pessoas da sociedade portuguesa avaliam a figura acima apresentada?

Completamente negativa.							**Completamente positiva.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Bloco: Avaliação do Estímulo S1____

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **<u>COM</u>** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **<u>SEM</u>** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

De que forma é que as pessoas da sociedade portuguesa avaliam a figura acima apresentada?

Completamente negativa.							**Completamente positiva.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Bloco: Avaliação do Estímulo S2____

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **COM** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **SEM** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

De que forma é que as pessoas da sociedade portuguesa avaliam a figura acima apresentada?

Completamente negativa.							**Completamente positiva.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Bloco: Avaliação do Estímulo S3____

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas* ***<u>COM</u>*** *Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas* ***<u>SEM</u>*** *Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

De que forma é que as pessoas da sociedade portuguesa avaliam a figura acima apresentada?

Completamente negativa.							**Completamente positiva.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Bloco: Avaliação do Estímulo C2

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **COM** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **SEM** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

De que forma é que as pessoas da sociedade portuguesa avaliam a figura acima apresentada?

Completamente negativa.							**Completamente positiva.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Bloco: Avaliação do Estímulo C3

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **COM** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **SEM** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

De que forma é que as pessoas da sociedade portuguesa avaliam a figura acima apresentada?

Completamente negativa.							**Completamente positiva.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Bloco: Avaliação do Estímulo S4

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **COM** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **SEM** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

De que forma é que as pessoas da sociedade portuguesa avaliam a figura acima apresentada?

Completamente negativa.							**Completamente positiva.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Bloco: Avaliação do Estímulo C4

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **COM** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **SEM** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

De que forma é que as pessoas da sociedade portuguesa avaliam a figura acima apresentada?

Completamente negativa.							**Completamente positiva.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Bloco: Avaliação do Estímulo C5

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **<u>COM</u>** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **<u>SEM</u>** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

De que forma é que as pessoas da sociedade portuguesa avaliam a figura acima apresentada?

Completamente negativa.							**Completamente positiva.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Bloco: Avaliação do Estímulo C6____

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **COM** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **SEM** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

De que forma é que as pessoas da sociedade portuguesa avaliam a figura acima apresentada?

Completamente negativa.							**Completamente positiva.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Bloco: Avaliação do Estímulo S5____

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **COM** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas **SEM** Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

De que forma é que as pessoas da sociedade portuguesa avaliam a figura acima apresentada?

Completamente negativa.							**Completamente positiva.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Bloco: Avaliação do Estímulo C7____

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas* ***COM*** *Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas* ***SEM*** *Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

De que forma é que as pessoas da sociedade portuguesa avaliam a figura acima apresentada?

Completamente negativa.							**Completamente positiva.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Bloco: Avaliação do Estímulo C8____

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas* ***COM*** *Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Em que medida as pessoas da sociedade portuguesa associam a figura apresentada à categoria social *"Pessoas* ***SEM*** *Deficiências e Incapacidades"*?

Não associam nada.							**Associam completamente.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

De que forma é que as pessoas da sociedade portuguesa avaliam a figura acima apresentada?

Completamente negativa.							**Completamente positiva.**
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

Bloco: Dados Sociodemográficos____

SD1 - Sexo

- ○ Masculino
- ○ Feminino

SD2 - Data de Nascimento: ____/____/_________

Introduza a data no formato dd/mm/aaaa, por favor.

SD3 - Nacionalidade____

SD4 - Distrito de Residência

- ○ Aveiro
- ○ Beja
- ○ Braga
- ○ Bragança
- ○ Castelo Branco
- ○ Coimbra
- ○ Évora
- ○ Faro
- ○ Guarda
- ○ Leiria
- ○ Lisboa
- ○ Portalegre
- ○ Porto
- ○ Santarém
- ○ Setúbal
- ○ Viana do Castelo
- ○ Vila Real
- ○ Viseu
- ○ Região Autónoma dos Açores
- ○ Região Autónoma da Madeira

SD5 - Nível de Escolaridade

Indique-nos, por favor, o nível de escolaridade mais elevado que completou.

- ○ Sem escolaridade.
- ○ 1.º Ano - 1.º Ciclo do Ensino Básico
- ○ 2.º Ano - 1.º Ciclo do Ensino Básico
- ○ 3.º Ano - 1.º Ciclo do Ensino Básico
- ○ 4.º Ano - 1.º Ciclo do Ensino Básico
- ○ 5.º Ano - 2.º Ciclo do Ensino Básico
- ○ 6.º Ano - 2.º Ciclo do Ensino Básico
- ○ 7.º Ano - 3.º Ciclo do Ensino Básico
- ○ 8.º Ano - 3.º Ciclo do Ensino Básico
- ○ 9.º Ano - 3.º Ciclo do Ensino Básico
- ○ 10.º Ano - Ensino Secundário
- ○ 11.º Ano - Ensino Secundário
- ○ 12.º Ano - Ensino Secundário
- ○ Licenciatura - Pré-Bolonha
- ○ Mestrado - Pré-Bolonha
- ○ Doutoramento - Pré-Bolonha
- ○ Licenciatura - 1.º Ciclo de Bolonha
- ○ Mestrado - 2.º Ciclo de Bolonha
- ○ Doutoramento - 3.º Ciclo de Bolonha
- ○ Outro. Qual? ____

SD6 - Profissão/Ocupação actual:____

SD7 - Tem alguma deficiência e/ou incapacidade?

- ○ Sim. Pode especificar-nos brevemente a sua situação, por favor?

- ○ Não.

Bloc: Contacto Directo com Pessoas com Deficiências e Incapacidades___________________

Familiares____

CDF1 - Tem algum familiar (avós, pais, irmãos, filhos...) com deficiências e incapacidades?

○ Sim. Quem? Indique-nos apenas o(s) grau(s) de parentesco, por favor.

○ Não. <u>**Skip logic:** If “Não” is selected, then skip to “Tem algum/a amigo/a (não familiar) com deficiências e incapacidades?”</u>

CDF2 - Com que frequência manteve contacto com algum dos seus familiares com deficiências e incapacidades durante o último ano?

Nunca.	Uma vez por ano.	Algumas vezes por ano.	Uma vez por mês.	Algumas vezes por mês.	Uma vez por semana.	Algumas vezes por semana.	Todos os dias.
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

CDF3 - Com que familiar com deficiências e incapacidades manteve um contacto mais frequente durante o último ano?

Indique-nos apenas o grau de parentesco, por favor.

CDF4 - Pode especificar-nos resumidamente, por favor, a situação de deficiência e incapacidade do/a familiar com quem contactou mais frequentemente no último ano?

CDF5 - Em que faixa etária se situa o/a familiar com deficiências e incapacidades com quem contactou mais frequentemente durante o último ano?

0 - 2 anos	3 - 6 anos	7 - 11 anos	12 - 17 anos	18 - 30 anos	31-40 anos	41 - 50 anos	51 - 60 anos	61 - 70 anos	71 - 80 anos	81 - 90 anos	+ 90 anos
○	○	○	○	○	○	○	○	○	○	○	○

CDF6 - Como avalia a qualidade da relação que mantém com o/a familiar com deficiências e incapacidades com quem contactou mais frequentemente durante o último ano?

Muito negativa.						Muito positiva.
1	2	3	4	5	6	7
○	○	○	○	○	○	○

Bloco: Contacto Directo com Pessoas com Deficiências e Incapacidades___________________

Amigos____

CDA1 - Tem algum/a amigo/a (não familiar) com deficiências e incapacidades?

○ Sim.

○ Não. **Skip Logic:** If "Não" is selected, then skip to "End of Block" ["End of Survey"].

CDA2 - Com que frequência teve contacto com algum/a desses amigos/as (não familiares) com deficiências e incapacidades durante o último ano?

Nunca.	Uma vez por ano.	Algumas vezes por ano.	Uma vez por mês.	Algumas vezes por mês.	Uma vez por semana.	Algumas vezes por semana.	Todos os dias.
0	1	2	3	4	5	6	7
○	○	○	○	○	○	○	○

CDA3 - Pode especificar-nos resumidamente, por favor, a situação de deficiência e incapacidade do/a amigo/a com quem contactou mais frequentemente no último ano?

CDA4 - Em que faixa etária se situa esse/a amigo/a com deficiências e incapacidades com quem contactou mais frequentemente durante o último ano?

0 - 2 anos	3 - 6 anos	7 - 11 anos	12 - 17 anos	18 - 30 anos	31-40 anos	41 - 50 anos	51 - 60 anos	61 - 70 anos	71 - 80 anos	81 - 90 anos	+ 90 anos
○	○	○	○	○	○	○	○	○	○	○	○

CDA5 - Como avalia a qualidade da relação que mantém com o/a amigo/a com deficiências e incapacidades com quem contactou mais frequentemente durante o último ano?

Muito negativa.						Muito positiva.
1	2	3	4	5	6	7
○	○	○	○	○	○	○

[Após o/a participante carregar no botão "Continuar":]

Terminou o preenchimento do questionário.

A sua resposta foi registada.

Muito obrigad@ pela sua participação!

Questões ou esclarecimentos através do e-mail:

ana_sofia_oliveira@iscte-iul.pt

Appendix G

*P**W**ID Exemplars subjective associations with the target categories and valence (ordered by descending order regarding mean).*

									Interval of confidence at 95%*		Skewness			Kurtosis		S-W
Exemplar		**Subjective evaluation of…**		**N**	**Min**	**Max**	**Mean**	**SD**	**Lower limit**	**Upper limit**	**Stat.**	**Std. Error**	**Crtl. Ratio**	**Stat.**	**Std. Error**	**Sig.****
C3		Association with	P**W**ID	16	4	7	6,69	0,793	6,25	7,00	-3,002	0,564	-5,323	9,565	1,091	<0,001
			PwID	16	0	3	0,44	0,814	0,13	0,88	2,348	0,564	4,163	6,262	1,091	<0,001
		Valence		16	0	6	2,75	1,807	1,88	3,63	-0,116	0,564	-0,206	-0,473	1,091	0,102
C1		Association with	P**W**ID	16	5	7	6,50	0,730	6,13	6,81	-1,174	0,564	-2,082	0,144	1,091	<0,001
			PwID	16	0	2	0,38	0,719	0,06	0,81	1,731	0,564	3,069	1,699	1,091	<0,001
		Valence		16	0	5	2,81	1,424	2,13	3,50	-0,258	0,564	-0,457	-0,388	1,091	0,495
C4		Association with	P**W**ID	16	4	7	6,50	0,894	6,00	6,88	-1,917	0,564	-3,399	3,297	1,091	<0,001
			PwID	16	0	3	0,50	0,894	0,13	1,00	1,917	0,564	3,399	3,297	1,091	<0,001
		Valence		16	1	5	3,00	1,211	2,44	3,56	0,000	0,564	0,000	-0,467	1,091	0,234
C6		Association with	P**W**ID	16	1	7	6,38	1,500	5,44	6,88	-3,450	0,564	-6,117	12,753	1,091	<0,001
			PwID	16	0	5	0,63	1,310	0,13	1,38	2,839	0,564	5,034	8,857	1,091	<0,001
		Valence		16	0	7	3,00	2,000	2,13	4,00	0,457	0,564	0,810	-0,496	1,091	0,328
C5		Association with	P**W**ID	16	1	7	6,31	1,493	5,44	6,81	-3,361	0,564	-5,959	12,307	1,091	<0,001
			PwID	16	0	5	0,63	1,258	0,19	1,37	3,119	0,564	5,530	10,916	1,091	<0,001
		Valence		16	0	6	2,88	1,455	2,19	3,56	0,246	0,564	0,436	0,783	1,091	0,465
C7		Association with	P**W**ID	16	1	7	6,25	1,571	5,38	6,88	-2,832	0,564	-5,021	8,868	1,091	<0,001
			PwID	16	0	7	0,75	1,770	0,13	1,81	3,317	0,564	5,881	11,836	1,091	<0,001
		Valence		16	0	5	2,50	1,461	1,75	3,19	-0,293	0,564	-0,520	-0,578	1,091	0,358
C2		Association with	P**W**ID	16	1	7	6,00	1,549	5,06	6,62	-2,459	0,564	-4,360	7,292	1,091	<0,001
			PwID	16	0	7	1,50	2,066	0,63	2,56	1,660	0,564	2,943	2,372	1,091	0,001
		Valence		16	0	6	2,88	1,628	2,13	3,69	0,228	0,564	0,404	-0,378	1,091	0,759
C8		Association with	P**W**ID	16	0	7	5,63	2,029	4,63	6,50	-1,876	0,564	-3,326	3,364	1,091	<0,001
			PwID	16	0	6	1,25	1,844	0,44	2,25	1,768	0,564	3,135	2,560	1,091	<0,001

							Interval of confidence at 95%*		Skewness			Kurtosis		S-W
Exemplar	**Subjective evaluation of…**	**N**	**Min**	**Max**	**Mean**	**SD**	**Lower limit**	**Upper limit**	**Stat.**	**Std. Error**	**Crtl. Ratio**	**Stat.**	**Std. Error**	**Sig.****
	Valence	16	1	7	3,31	1,493	2,69	4,06	0,897	0,564	1,590	1,149	1,091	0,186

*****Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples.
**α=0.05

Appendix H

PwID Exemplars’ pre-test regarding subjective associations with the target categories and valence (ordered by descending order regarding mean).

								Interval of confidence at 95%*		Skewness			Kurtosis		S-W
Exemplar	**Subjective evaluation of…**		**N**	**Min**	**Max**	**Mean**	**SD**	**Lower limit**	**Upper limit**	**Stat.**	**Std. Error**	**Crtl. Ratio**	**Stat.**	**Std. Error**	**Sig.****
S4 	Association with	PwID	16	6	7	6,94	0,250	6,80	7,00	4,000	0,564	7,092	16,000	1,091	<0,001
		P**W**ID	16	0	2	0,13	0,500	0,00	0,40	-4,000	0,564	-7,092	16,000	1,091	<0,001
	Valence		16	3	7	5,69	1,448	5,00	6,35	-0,880	0,564	-1,560	-0,564	1,091	0,005
S2 	Association with	PwID	16	5	7	6,63	0,719	6,24	6,94	2,509	0,564	4,449	4,898	1,091	<0,001
		P**W**ID	16	0	1	0,13	0,342	0,00	0,31	-1,731	0,564	-3,069	1,699	1,091	<0,001
	Valence		16	3	7	5,38	1,544	4,67	6,12	-0,353	0,564	-0,626	-1,234	1,091	0,010
S5 	Association with	PwID	16	4	7	6,63	0,806	6,20	6,94	2,509	0,564	4,449	4,898	1,091	<0,001
		P**W**ID	16	0	1	0,13	0,342	0,00	0,29	-2,644	0,564	-4,688	7,652	1,091	<0,001
	Valence		16	3	7	6,06	1,340	5,41	6,67	-1,648	0,564	-2,922	1,957	1,091	<0,001
S1 	Association with	PwID	16	3	7	5,81	1,424	5,12	6,44	2,072	0,564	3,674	5,013	1,091	<0,001
		P**W**ID	16	0	5	0,88	1,360	0,31	1,63	-1,048	0,564	-1,858	-0,062	1,091	0,003
	Valence		16	2	7	4,94	1,482	4,29	5,69	0,121	0,564	0,215	-0,536	1,091	0,019
S3 	Association with	PwID	16	0	7	4,31	2,089	3,25	5,27	-0,001	0,564	-0,002	-1,627	1,091	0,024
		P**W**ID	16	0	6	2,63	2,217	1,56	3,73	-0,475	0,564	-0,842	-0,298	1,091	0,283
	Valence		16	2	7	4,50	1,461	3,82	5,25	0,293	0,564	0,520	-0,578	1,091	0,358

*****Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples.
**α=0.05

Appendix I

Participants' Experience working with PWID.

Experience	Frequency	Percent	Cumulative Percent
< 1 year	2	4,1%	4,1%
1 - 3 years	10	20,4%	24,5%
4 - 10 years	14	28,6%	53,1%
11 - 20 years	17	34,7%	87,8%
21 - 30 years	5	10,2%	98,0%
31 - 40 years	1	2,0%	100,0%
Total	49	100,0%	

Appendix J

Participants' distribution by multiple relationship types with PWID.

					Do you have any clients with impairments and disabilities?*					
					Yes		No		Total	
					Do you have any co-workers with impairments and disabilities?		Do you have any co-workers with impairments and disabilities?		Do you have any co-workers with impairments and disabilities?	
					Yes	No	Yes	No	Yes	No
Do you have any family members with impairments and disabilities?	Yes	Do you have any friends with impairments and disabilities?	Yes	Count	15	0	0	0	15	0
				Row N %	83,3%	0,0%	0,0%	0,0%	83,3%	0,0%
				Layer N %	30,6%	0,0%	0,0%	0,0%	30,6%	0,0%
			No	Count	3	0	0	0	3	0
				Row N %	16,7%	0,0%	0,0%	0,0%	16,7%	0,0%
				Layer N %	6,1%	0,0%	0,0%	0,0%	6,1%	0,0%
	No	Do you have any friends with impairments and disabilities?	Yes	Count	12	0	0	0	12	0
				Row N %	40,0%	0,0%	0,0%	0,0%	40,0%	0,0%
				Layer N %	24,5%	0,0%	0,0%	0,0%	24,5%	0,0%
			No	Count	18	1	0	0	18	1
				Row N %	60,0%	100,0%	0,0%	0,0%	60,0%	100,0%
				Layer N %	36,7%	2,0%	0,0%	0,0%	36,7%	2,0%
	Total	Do you have any friends with impairments and disabilities?	Yes	Count	27	0	0	0	27	0
				Row N %	56,2%	0,0%	0,0%	0,0%	56,2%	0,0%
				Layer N %	55,1%	0,0%	0,0%	0,0%	55,1%	0,0%
			No	Count	21	1	0	0	21	1
				Row N %	43,8%	100,0%	0,0%	0,0%	43,8%	100,0%
				Layer N %	42,9%	2,0%	0,0%	0,0%	42,9%	2,0%

* This question was created post administration and during statistical analysis to facilitate the construction of this table.

Appendix K

Category dictionary - Co-workers' Impairment(s) and Disability(ies) Situation as defined by participants.

Themes	Categories	Examples	Code
Co-workers' Impairment(s) and Disability(ies) Situation	**A.** Auditory Impairment and Disability	"A deficiência é surdez." "Colega Surda profunda." "Colega surda." "Défice auditivo." "Deficiência ao nível auditivo." "Deficiência Auditiva." "Deficiência surdez." "Surda Profunda." "Surdez profunda." "Surdez." "Surdez. O contacto só é possível comunicando por Língua Gestual." "Surdo."	**1**
	B. Visual Impairment and Disability	"Deficiência visual." "Baixa visão." "Cegueira." "Pessoa com deficiência visual." "Cega." "Pessoa cega."	**2**
	C. Physical/motor Impairment and Disability	"Deficiência motora."	**3**
	D. Auditory and Visual Impairment and Disability	"Dificuldades visuais e surdez." "Surda e cega." "Deficiência visual e auditiva."	**4**
	E. Physical/motor and Intellectual Impairment and Disability	"Incapacidade física e dificuldades de aprendizagem[1]."	**5**
Other answers	**F.** Situations where the contact with the colleague occurs	"Apenas para tratar de assuntos relacionados com o trabalho."	**6**

---

[1] The concept of "learning difficulties" ("dificuldades de aprendizagem") may include an impairment and/or a disability in various functions/structures of the body and does not necessarily imply an impairment in intellectual functions. However, considering the informal description that the participant made of the person concerned, and recorded in an independent control document of the questionnaire, it is believed that this categorization will be adequate, although necessarily reductive, something also arising from the response itself.

Appendix L

Occurrence analysis - Co-workers' impairment(s) and disability(ies) situation categories, as defined by participants.

Themes	Code	Categories	Frequency	Percent	Valid Percent	Cumulative Percent
Co-workers' Impairment(s) and Disability(ies) Situation	**1**	**A.** Auditory Impairment(s) and Disability(ies)	32	65,3	66,7	66,7
	2	**B.** Visual Impairment(s) and Disability(ies)	9	18,4	18,8	85,4
	3	**C.** Physical/motor Impairment(s) and Disability(ies)	2	4,1	4,2	89,6
	4	**D.** Auditory and Visual Impairment(s) and Disability(ies)	3	6,1	6,3	95,8
	5	**E.** Physical/motor and Intellectual Impairment(s) and Disability(ies)	1	2,0	2,1	97,9
Other answers	**6**	**F.** Situations where the contact with the colleague occurs	1	2,0	2,1	100,0
		Total	48	98,0	100,0	
		Missing System	1	2,0		
		Total	49	100,0		

Appendix M

Category Dictionary - Clients' impairment(s) and disability(ies) situation as defined by participants.

Themes	Categories	Examples	Code
Clients' Impairment(s) and Disability(ies) Situation	**A.** Auditory Impairment(s) and Disability(ies)	"Utente surdo profundo." "Pessoa com surdez." "Surdo." "Deficiência auditiva."	**1**
	B. Auditory Impairment(s) and Disability(ies) and Chronical Disease	"Surdez e epilepsia."	**2**
	C. Visual Impairment(s) and Disability(ies)	"Deficiência visual." "Pessoa cega." "Cegueira." "Pessoa com deficiência visual." "Cego."	**3**
	D. Auditory and Visual Impairment(s) and Disability(ies)	"Surdocego – dificuldade na comunicação linguística." "Surdocego." "Surdocegueira." "Surdocegueira congénita." "Surdez e cegueira." "Deficiência visual e auditiva." "Deficiência auditiva e visual." "A incapacidade surdo/cegueira."	**4**
	E. Auditory and Visual and Intellectual Impairments and Disabilities	"Surdocegueira e défice cognitivo." "Surdocega, é uma utente surdocega com alguma capacidade de raciocínio."	**5**
	F. Multi-Impairments and Disabilities	"Multideficiente." "Multideficiência." "Surdocegueira, défice cognitivo, surdez, autismo." "Multideficiência, maioritariamente deficiência visual e auditiva."	**6**
	G. Impairment(s) and Disability(ies) in Global and/or Specific Mental Functions	"Adulta jovem, acolhida num hospital psiquiátrico, segundo a própria por Doença Bipolar. Evidencia imaturidade emocional, no processamento e apreensão de informações comuns, revelando em simultâneo comportamentos descontextualizados em função das situações que experiencia."	**7**
Other answers	**H.** Situations where the contact with the client occurs	"No contexto de sala de aula e nos intervalos, quando necessário. Pontualmente em almoço de convívio." "Actividades educativas e lúdicas e da vida diária – higiene e alimentação."	**8**

Appendix N

Occurrence analysis - Clients' Impairments and Disabilities Situations Categories as defined by participants.

Themes	Code	Categories	Frequency	Percent	Valid Percent	Cumulative Percent
Clients' Impairment(s) and Disability(ies) Situation	**1**	**A.** Auditory Impairment(s) and Disability(ies)	6	12,2	12,2	12,2
	2	**B.** Auditory Impairment(s) and Disability(ies) and Chronical Disease	1	2,0	2,0	14,3
	3	**C.** Visual Impairment(s) and Disability (ies)	4	8,2	8,2	22,4
	4	**D.** Auditory and Visual Impairment(s) and Disability	27	55,1	55,1	77,6
	5	**E.** Auditory and Visual and Intellectual Impairment(s) and Disability(ies)	2	4,1	4,1	81,6
	6	**F.** Multi-Impairments and Disabilities	6	12,2	12,2	93,9
	7	**G.** Impairment(s) and Disability(ies) in Global/Specific Mental Functions	1	2,0	2,0	95,9
Other answers	**8**	**H.** Situations where the contact with the client occurs	2	4,1	4,1	100,0
		Total	49	100,0	100,0	

Appendix O

Category Dictionary - Friends' impairment(s) and disability(ies) situation as defined by participants.

Themes	Categories	Examples	Code
Friends' Impairment(s) and Disability(ies) Situation	**A.** Auditory Impairment(s) and Disability(ies)	"Surdo(a) profunda." "Surdo." "Surdez profunda." "Deficiência auditiva." "Surdez."	**1**
	B. Visual Impairment(s) and Disability(ies)	"Cego." "Deficiência Visual." "Pessoa cega." "Visão com problemas congénitos numa das vistas."	**2**
	C. Auditory and Visual Impairment(s) and Disability(ies)	"Deficiência visual e auditiva." "Baixa visão e surdez profunda."	**3**
	D. Physical/motor Impairment(s) and Disability	"Poliomielite – problemas motores." "Pessoa com Paralisia Cerebral." "Deficiência motora." "Deficiência física." "Motora – fragilidade no lado esquerdo, braço e perna com falta de tónus muscular." "Deficiência psico-motora."	**4**
	E. Impairment(s) and Disability(ies) in Global and/or Specific Mental Functions	"Cognição." "Autismo." "Deficiência na atenção." "Síndrome de Prader-Willi"	**5**

Appendix P

Occurrence analysis - Friends' impairment(s) and disability(ies) situation categories as defined by participants.

Themes	Code	Categories	Frequency	Percent	Valid Percent	Cumulative Percent
Friends' Impairment(s) and Disability(ies) Situation	**1**	**A.** Auditory Impairment(s) and Disability(ies)	6	12,2	23,1	23,1
	2	**B.** Visual Impairment(s) and Disability(ies)	8	16,3	30,8	53,8
	3	**C.** Auditory and Visual Impairment(s) and Disability(ies)	2	4,1	7,7	61,5
	4	**D.** Physical/motor Impairment(s) and Disability(ies)	6	12,2	23,1	84,6
	5	**E.** Impairment(s) and Disability(ies) in Global and/or Specific Mental Functions	4	8,2	15,4	100,0
		Total	26	53,1	100,0	
		Missing System	23	46,9		

Appendix Q

Category Dictionary - Family members' impairment(s) and disability(ies) situation as defined by participants.

Theme	Categories	Examples	Code
Family Members' Impairment(s) and Disability(ies) Situation	**A.** Auditory Impairment(s) and Disability(ies)	"Esta familiar está a perder a audição."	**1**
		"Dificuldades de audição."	
	B. Visual Impairment(s) and Disability(ies)	"Cego de um olho."	**2**
		"Cego."	
	C. Physical/motor Impairment(s) and Disability(ies)	"Paralisia cerebral."	**3**
		"Deficiência física (após AVC)"	
		"Deficiência motora: não tem uma perna."	
		"Deficiência e incapacidade a nível motor/físico".	
		"Incapacidade motora."	
		"Deficiência física"	
		"Amputada de dedos do pé."	
		"Teve um AVC isquémico ficando paralisada dos dois lados a nível motor."	
	D. Physical/motor and Intellectual Impairment(s) and Disability(ies)	"Deficiência a nível cognitivo e motor."	**4**
	E. Multi-impairment(s) and disability(ies)	"Multideficiência. É uma pessoa com muitas limitações a nível da capacidade cognitiva."	**5**
	G. Impairment(s) and Disability(ies) in Global and/or Specific Mental Functions	"Dificuldade Intelectual e Desenvolvimental (DID)."	**6**
		"Dislexia"	
		"Síndrome de Down."	
		"Nível intelectual baixo."	

Appendix R

Occurrence analysis - Family members' impairment(s) and disability(ies) situation categories as defined by participants.

Themes	Code	Categories	Frequency	Percent	Valid Percent	Cumulative Percent
Family members' Impairment(s) and Disability(ies) Situation	**1**	**A.** Auditory Impairment(s) and Disability(ies)	2	4,1	11,1	11,1
	2	**B.** Visual Impairment(s) and Disability(ies)	2	4,1	11,1	22,2
	3	**C.** Physical/motor Impairment(s) and Disability(ies)	8	16,3	44,4	66,7
	4	**D.** Physical/motor and Intellectual Impairment(s) and Disability(ies)	1	2,0	5,6	72,2
	5	**E.** Multi-impairments and disabilities	1	2,0	5,6	77,8
	6	**F.** Impairment(s) and Disability(ies) in Global and/or Specific Mental Functions	4	8,2	22,2	100,0
		Total	18	36,7	100,0	
		Missing System	31	63,3		
		Total	49	100,0		

Appendix S

Disability Attitude IAT Inquisit Script

```
**************************************************************************************************************
**************************************************************************************************************
    Implicit Attitude Test (IAT)
**************************************************************************************************************
**************************************************************************************************************
    Last Modified:  05-19-2009 at 09:00 AM (PST)
**************************************************************************************************************
**************************************************************************************************************

***********************************************************************
This sample IAT can be easily adapted to different target categories
and attributes. To change the categories, you need only change the
stimulus items and labels immediately below this line.

***********************************************************************

<item attributeAlabel>
/1 = "Bom"
</item>

<item attributeA>
/1 = "Alegria"
/2 = "Maravilhoso"
/3 = "Amor"
/4 = "Paz"
/5 = "Riso"
/6 = "Feliz"
</item>

<item attributeBlabel>
/1 = "Mau"
</item>

<item attributeB>
/1 = "Mau"
/2 = "Terrível"
/3 = "Horroroso"
/4 = "Falhanço"
/5 = "Malvado"
/6 = "Horrível"
</item>

<item targetAlabel>
/1 = "Pessoas COM Deficiências e Incapacidades"
</item>
```

```
<item targetA>
/1 = "Incapac1.jpg"
/2 = "Incapac2.jpg"
/3 = "Incapac3.jpg"
/4 = "Incapac4.jpg"
</item>

<item targetBlabel>
/1 = "Pessoas SEM Deficiências e Incapacidades"
</item>

<item targetB>
/1 = "Capac1.jpg"
/2 = "Capac2.jpg"
/3 = "Capac3.jpg"
/4 = "Capac4.jpg"
</item>

************************************************************************
To change the categories, you need only change the stimulus items and
labels immediately above this line. All commands below relate to the
IAT procedure, and need only be changed if you wish to modify the
generic IAT procedure.
************************************************************************


************************************************************************
Performance summary
************************************************************************

<trial summary>
/ stimulustimes = [0=summary]
/ validresponse = (" ")
/ recorddata = false
/ ontrialbegin = [values.magnitude = "little to no"]
/ ontrialbegin = [if( abs(expressions.d) > 0.15 ) values.magnitude = "a slight"]
/ ontrialbegin = [if( abs(expressions.d) > 0.35 ) values.magnitude = "a moderate"]
/ ontrialbegin = [if( abs(expressions.d) >= 0.65 ) values.magnitude = "a strong"]
/ ontrialbegin = [if(expressions.d >= 0.0) expressions.preferred = item.targetALabel.1]
/ ontrialbegin = [if(expressions.d < 0.0) expressions.preferred = item.targetBLabel.1]
/ ontrialbegin = [if(expressions.d < 0.0) expressions.notpreferred= item.targetALabel.1]
/ ontrialbegin = [if(expressions.d >= 0.0) expressions.notpreferred= item.targetBLabel.1]
</trial>

<text summary>
/ items = ("Your IAT score (D) was <% expressions.d %>, which suggests <% values.magnitude %>
automatic preference for <% expressions.preferred %> compared to <% expressions.notpreferred
%>.~n~n~nPress the spacebar to complete this session.")
/ size = (60%, 60%)
/ hjustify = left
 </text>
```

```
**********************************************************************
Task instruction stimuli
**********************************************************************

<trial instructions>
/ stimulustimes = [1=instructions, spacebar]
/ correctresponse = (" ")
/ errormessage = false
/ recorddata = false
</trial>

<text instructions>
/ items = instructions
/ hjustify = left
/ size = (90%, 55%)
/ position = (50%, 95%)
/ valign = bottom
/ select = sequence
/ resetinterval = 20
</text>

<item instructions>
/ 1 = "Posicione os seus dedos indicadores ou médios sobre as teclas ~"E~" e ~"I~" do seu
teclado.~n~nPalavras ou imagens representando as categorias no topo vão aparecer uma a uma no
centro do ecrã. Quando o item pertencer a uma categoria no lado esquerdo, carregue na tecla
~"E~"; quando o item pertencer a uma categoria no lado direito, carregue na tecla ~"I~". Os itens
pertencem a apenas uma categoria. Se cometer um erro, aparecerá um ~"X~" - rectifique o erro
pressionando a outra tecla.
~n~nEsta é uma tarefa de classificação cronometrada. REALIZE-A O MAIS RAPIDAMENTE QUE
CONSEGUIR fazendo o menor número de erros possível. Realizá-la muito lentamente ou cometer
muitos erros prejudicará a interpretação do seu resultado. Esta tarefa levará 5 minutos a realizar."

/ 2 ="Veja acima, as categorias mudaram. Os itens para classificação mudaram também. As regras,
contudo, são as mesmas.~n~nQuando os itens pertencerem à categoria do lado esquerdo, carregue
na tecla ~"E~"; quando o item pertencer à categoria do lado direito, carregue na tecla ~"I~".~n~nOs
itens pertencem apenas a uma categoria. Um ~"X~" aparecerá após um erro - corrija o erro
carregando na outra tecla.~n~nCOMPLETE O TESTE O MAIS RAPIDAMENTE POSSÍVEL."

/ 3 = "Veja acima, as quatro categorias que viu separadas agora aparecem juntas.~n~nLembre-se,
cada item pertence a apenas um grupo. Por exemplo, se as categorias ~"flor~" e ~"bom~"
aparecessem em lados opostos acima, imagens ou palavras significando ~"flor~" iriam para a
categoria ~"flor~", e não para a categoria ~"bom~".~n~n
Os itens e rótulos a verde e branco podem ajudar a identificar a categoria apropriada. Use as
teclas ~"E~" e ~"I~" para separar os itens nas quatro categorias, à esquerda e à direita, e corrija os
erros carregando na outra tecla."

/ 4 = "Classifique as mesmas quatro categorias novamente.~n~nLembre-se de fazê-lo o mais
rapidamente que puder, fazendo o menor número de erros possível.~n~n
Os itens e rótulos a verde e branco podem ajudar a identificar a categoria apropriada. Use as
teclas ~"E~" e ~"I~" para separar os itens nas quatro categorias, à esquerda e à direita, e corrija os
erros carregando na outra tecla."
```

```
/ 5 = "Veja acima, existem apenas duas categorias e elas trocaram de posição.~n~nO conceito que estava anteriormente do lado esquerdo, agora está no lado direito, e o conceito que estava antes do lado direito, está agora no lado esquerdo. Pratique esta nova configuração.~n~nUse as teclas ~"E~" e ~"I~" para classificar os itens em categorias, à esquerda e à direita , e corrija os erros carregando na outra tecla."

/ 6 = "Veja acima, as quatro categorias agora aparecem juntas numa nova configuração.~n~nLembre-se, cada item pertence apenas a um grupo. Os itens e rótulos a verde e branco podem ajudar a identificar a categoria apropriada. Use as teclas ~"E~" e ~"I~" para separar os itens nas quatro categorias, à esquerda e à direita, e corrija os erros carregando na outra tecla."

/ 7 = "Classifique as mesmas quatro categorias novamente.~n~nLembre-se de fazê-lo o mais rapidamente que puder, fazendo o menor número de erros possível.~n~n
Os itens e rótulos a verde e branco podem ajudar a identificar a categoria apropriada. Use as teclas ~"E~" e ~"I~" para separar os itens nas quatro categorias, à esquerda e à direita, e corrija os erros carregando na outra tecla."
</item>

<text spacebar>
/ items = ("Pressione a BARRA DE ESPAÇO para começar.")
/ position = (50%, 95%)
/ valign = bottom
</text>

<text attributeA>
/ items = attributeA
/ fontstyle = ("Arial", 5%)
/ txcolor = (0, 255, 0)
</text>

<text attributeB>
/ items = attributeB
/ fontstyle = ("Arial", 5%)
/ txcolor = (0, 255, 0)
</text>

<picture targetB>
/ items = targetB
/ size = (35%, 35%)
</picture>

<picture targetA>
/ items = targetA
/ size = (35%, 35%)
</picture>

<text error>
/ position = (50%, 75%)
/ items = ("X")
/ color = (255, 0, 0)
/ fontstyle = ("Arial", 10%, true)
</text>
```

```
<text attributeAleft>
/ items = attributeAlabel
/ valign = top
/ halign = left
/ position = (5%, 5%)
/ txcolor = (0, 255, 0)
/ fontstyle = ("Arial", 5%)
</text>

<text attributeBright>
/ items = attributeBlabel
/ valign = top
/ halign = right
/ position = (95%, 5%)
/ txcolor = (0, 255, 0)
/ fontstyle = ("Arial", 5%)
</text>

<text attributeAleftmixed>
/ items = attributeAlabel
/ valign = top
/ halign = left
/ position = (5%, 19%)
/ txcolor = (0, 255, 0)
/ fontstyle = ("Arial", 5%)
</text>

<text attributeBrightmixed>
/ items = attributeBlabel
/ valign = top
/ halign = right
/ position = (95%, 19%)
/ txcolor = (0, 255, 0)
/ fontstyle = ("Arial", 5%)
</text>

<text targetBleft>
/ items = targetBlabel
/ valign = top
/ halign = left
/ position = (5%, 5%)
/ fontstyle = ("Arial", -29, false, false, false, false, 5, 0)
</text>

<text targetBright>
/ items = targetBlabel
/ valign = top
/ halign = right
/ position = (95%, 5%)
/ fontstyle = ("Arial", -29, false, false, false, false, 5, 0)
</text>

<text targetAleft>
```

```
/ items = targetAlabel
/ valign = top
/ halign = left
/ position = (5%, 5%)
/ fontstyle = ("Arial", -29, false, false, false, false, 5, 0)
</text>

<text targetAright>
/ items = targetAlabel
/ valign = top
/ halign = right
/ position = (95%, 5%)
/ fontstyle = ("Arial", -29, false, false, false, false, 5, 0)
</text>

<text orleft>
/ items = ("ou")
/ valign = top
/ halign = left
/ position = (5%, 12%)
/ fontstyle = ("Arial", 5%)
</text>

<text orright>
/ items = ("ou")
/ valign = top
/ halign = right
/ position = (95%, 12%)
/ fontstyle = ("Arial", 5%)
</text>

************************************************************************
Trials
************************************************************************

<trial attributeA>
/ validresponse = ("E", "I")
/ correctresponse = ("E")
/ stimulusframes = [1 = attributeA]
/ posttrialpause = 250
</trial>

<trial attributeB>
/ validresponse = ("E", "I")
/ correctresponse = ("I")
/ stimulusframes = [1 = attributeB]
/ posttrialpause = 250
</trial>


<trial targetBleft>
/ validresponse = ("E", "I")
/ correctresponse = ("E")
```

```
/ stimulusframes = [1 = targetB]
/ posttrialpause = 250
</trial>

<trial targetBright>
/ validresponse = ("E", "I")
/ correctresponse = ("I")
/ stimulusframes = [1 = targetB]
/ posttrialpause = 250
</trial>

<trial targetAleft>
/ validresponse = ("E", "I")
/ correctresponse = ("E")
/ stimulusframes = [1 = targetA]
/ posttrialpause = 250
</trial>

<trial targetAright>
/ validresponse = ("E", "I")
/ correctresponse = ("I")
/ stimulusframes = [1 = targetA]
/ posttrialpause = 250
</trial>

************************************************************************
Blocks
************************************************************************

<block attributepractice>
/ bgstim = (attributeAleft, attributeBright)
/ trials = [1=instructions;2-21 = random(attributeA, attributeB)]
/ errormessage = true(error,200)
/ responsemode = correct
</block>

<block targetcompatiblepractice>
/ bgstim = (targetAleft, targetBright)
/ trials = [1=instructions;2-21 = random(targetAleft, targetBright)]
/ errormessage = true(error,200)
/ responsemode = correct
</block>

<block targetincompatiblepractice>
/ bgstim = (targetAright, targetBleft)
/ trials = [1=instructions;2-21 = random(targetAright, targetBleft)]
/ errormessage = true(error,200)
/ responsemode = correct
</block>

<block targetcompatiblepracticeswitch>
/ bgstim = (targetAleft, targetBright)
/ trials = [1=instructions;2-41 = random(targetAleft, targetBright)]
```

```
/ errormessage = true(error,200)
/ responsemode = correct
</block>

<block targetincompatiblepracticeswitch>
/ bgstim = (targetAright, targetBleft)
/ trials = [1=instructions;2-41 = random(targetAright, targetBleft)]
/ errormessage = true(error,200)
/ responsemode = correct
</block>

<block compatibletest1>
/ bgstim = (targetAleft, orleft, attributeAleftmixed, targetBright, orright, attributeBrightmixed)
/ trials = [1=instructions;
  3,5,7,9,11,13,15,17,19,21= random(targetAleft, targetBright);
  2,4,6,8,10,12,14,16,18,20 = random(attributeA, attributeB)]
/ errormessage = true(error,200)
/ responsemode = correct
/ ontrialend = [if(block.compatibletest1.latency  <= 10000 &&
block.compatibletest1.currenttrialnumber != 1 ) values.sum1a =  values.sum1a +
block.compatibletest1.latency]
/ ontrialend = [if(block.compatibletest1.latency  <= 10000 &&
block.compatibletest1.currenttrialnumber != 1 ) values.n1a =  values.n1a + 1]
/ ontrialend = [if(block.compatibletest1.latency  <= 10000 &&
block.compatibletest1.currenttrialnumber != 1 ) values.ss1a =  values.ss1a +
(block.compatibletest1.latency * block.compatibletest1.latency)]
</block>

<block compatibletest2>
/ bgstim = (targetAleft, orleft, attributeAleftmixed, targetBright, orright, attributeBrightmixed)
/ trials = [
  2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40 = random(targetAleft, targetBright);
  1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39 = random(attributeA, attributeB)]
/ errormessage = true(error,200)
/ responsemode = correct
/ ontrialend = [if(block.compatibletest2.latency  <= 10000) values.sum1b =  values.sum1b +
block.compatibletest2.latency]
/ ontrialend = [if(block.compatibletest2.latency  <= 10000) values.n1b =  values.n1b + 1]
/ ontrialend = [if(block.compatibletest2.latency  <= 10000) values.ss1b =  values.ss1b +
(block.compatibletest2.latency * block.compatibletest2.latency)]
</block>

<block incompatibletest1>
/ bgstim = (targetBleft, orleft, attributeAleftmixed, targetAright, orright, attributeBrightmixed)
/ trials = [1=instructions;
  3,5,7,9,11,13,15,17,19,21 = random(targetBleft, targetAright);
  2,4,6,8,10,12,14,16,18,20 = random(attributeA, attributeB)]
/ errormessage = true(error,200)
/ responsemode = correct
/ ontrialend = [if(block.incompatibletest1.latency  <= 10000 &&
block.incompatibletest1.currenttrialnumber != 1) values.sum2a =  values.sum2a +
block.incompatibletest1.latency]
```

```
/ ontrialend = [if(block.incompatibletest1.latency  <= 10000 &&
block.incompatibletest1.currenttrialnumber != 1 ) values.n2a =  values.n2a + 1]
/ ontrialend = [if(block.incompatibletest1.latency  <= 10000 &&
block.incompatibletest1.currenttrialnumber != 1 ) values.ss2a =  values.ss2a +
(block.incompatibletest1.latency * block.incompatibletest1.latency)]
</block>

<block incompatibletest2>
/ bgstim = (targetBleft, orleft, attributeAleftmixed, targetAright, orright, attributeBrightmixed)
/ trials = [
  2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40 = random(targetBleft, targetAright);
  1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39 = random(attributeA, attributeB)]
/ errormessage = true(error,200)
/ responsemode = correct
/ ontrialend = [if(block.incompatibletest2.latency  <= 10000) values.sum2b =  values.sum2b +
block.incompatibletest2.latency]
/ ontrialend = [if(block.incompatibletest2.latency  <= 10000) values.n2b =  values.n2b + 1]
/ ontrialend = [if(block.incompatibletest2.latency  <= 10000) values.ss2b =  values.ss2b +
(block.incompatibletest2.latency * block.incompatibletest2.latency)]
</block>

<block compatibletestinstructions>
/ bgstim = (targetAleft, orleft, attributeAleftmixed, targetBright, orright, attributeBrightmixed)
/ trials = [1=instructions]
/ recorddata = false
</block>

<block incompatibletestinstructions>
/ bgstim = (targetBleft, orleft, attributeAleftmixed, targetAright, orright, attributeBrightmixed)
/ trials = [1=instructions]
/ recorddata = false
</block>

<block summary>
/ trials = [1=summary]
/ recorddata = false
</block>

**************************************************************************
Experiment
**************************************************************************

<defaults>
/ fontstyle = ("Arial", 3.5%)
/ screencolor = (0,0,0)
/ txbgcolor = (0,0,0)
/ txcolor = (255, 255, 255)
/ minimumversion = "3.0.0.0"
</defaults>

<expt>
/ blocks = [1=block1; 2=attributepractice; 3=block3; 4=block4; 5=block5; 6=block6; 7=block7;
8=block8; 9=block9]
```

```
</expt>

<variables>
/ group = (1 of 2) (block1=targetcompatiblepractice; block3=compatibletest1;
block4=compatibletestinstructions; block5=compatibletest2; block6=targetincompatiblepractice;
block7=incompatibletest1; block8=incompatibletestinstructions; block9=incompatibletest2)
/ group = (2 of 2) (block1=targetincompatiblepractice; block3=incompatibletest1;
block4=incompatibletestinstructions; block5=incompatibletest2; block6=targetcompatiblepractice;
block7=compatibletest1; block8=compatibletestinstructions; block9=compatibletest2)
</variables>

************************************************************************
Data Columns
************************************************************************

<data>
/ columns = [date, time, subject, blockcode, blocknum, trialcode, trialnum, response, correct,
latency, stimulusnumber, stimulusitem, expressions.da, expressions.db, expressions.d ]
</data>

************************************************************************
Test Monkey
************************************************************************
<monkey>
/ latencydistribution = normal(500, 100)
/ percentcorrect = 90
</monkey>

************************************************************************
Scoring
************************************************************************
<values>
/ sum1a = 0
/ sum2a = 0
/ sum1b = 0
/ sum2b = 0
/ n1a = 0
/ n2a = 0
/ n1b = 0
/ n2b = 0
/ ss1a = 0
/ ss2a = 0
/ ss1b = 0
/ ss2b = 0
/ magnitude = "unknown"
</values>

* 1 is compatible, 2 is incompatible
* a is first block, b is second block

<expressions>
/ m1a = values.sum1a / values.n1a
/ m2a = values.sum2a / values.n2a
```

```
/ m1b = values.sum1b / values.n1b
/ m2b = values.sum2b / values.n2b
/ sd1a = sqrt((values.ss1a - (values.n1a * (expressions.m1a * expressions.m1a))) / (values.n1a - 1))
/ sd2a = sqrt((values.ss2a - (values.n2a * (expressions.m2a * expressions.m2a))) / (values.n2a - 1))
/ sd1b = sqrt((values.ss1b - (values.n1b * (expressions.m1b * expressions.m1b))) / (values.n1b - 1))
/ sd2b = sqrt((values.ss2b - (values.n2b * (expressions.m2b * expressions.m2b))) / (values.n2b - 1))
/ sda = sqrt((((values.n1a - 1) * (expressions.sd1a * expressions.sd1a) + (values.n2a - 1) *
(expressions.sd2a * expressions.sd2a)) + ((values.n1a + values.n2a) * ((expressions.m1a -
expressions.m2a) * (expressions.m1a - expressions.m2a)) / 4) ) / (values.n1a + values.n2a - 1) )
/ sdb = sqrt((((values.n1b - 1) * (expressions.sd1b * expressions.sd1b) + (values.n2b - 1) *
(expressions.sd2b * expressions.sd2b)) + ((values.n1b + values.n2b) * ((expressions.m1b -
expressions.m2b) * (expressions.m1b - expressions.m2b)) / 4) ) / (values.n1b + values.n2b - 1) )
/ da = (m2a - m1a) / expressions.sda
/ db = (m2b - m1b) / expressions.sdb
/ d = (expressions.da + expressions.db) / 2
/ preferred = "unknown"
/ notpreferred = "unknown"
</expressions>
```

Appendix T

Disability Attitude IAT seven-block structure.

Order	Screen Position/ Answer Key	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6	Block 7
		Initial target-concept discrimination	Associated attribute discrimination	Practice - Initial combined task	Test - Initial combined task	Reversed target-concept discrimination	Practice – Reversed combined task	Test -Reversed combined task
		20 trials	20 trials	20 trials	40 trials	20 trials	20 trials	40 trials
1 - Compatible First *Even Participant Number*	**Left** “E”	"P**W**ID" **(targetAlabel)**	“Good” **(attributeAlabel)**	"P**W**ID" **(targetAlabel)** + "Good" **(attributeAlabel)**	"P**W**ID" + "Good"	"PwID" **(targetBlabel)**	"PwID" **(targetBlabel)** + "Good" **(attributeAlabel)**	"PwID" + "Good"
	Right “I”	"PwID" **(targetBlabel)**	“Bad” **(attributeBlabel)**	"PwID" **(targetBlabel)** + "Bad" **(attributeBlabel)**	"PwID" + "Bad"	"P**W**ID" **(targetAlabel)**	"P**W**ID" **(targetAlabel)** + "Bad" **(attributeBlabel)**	"P**W**ID" + "Bad"
2 - Incompatible First *Odd Participant Number*	**Left** “E”	"PwID" **(targetBlabel)**	“Good” **(attributeAlabel)**	"PwID" **(targetBlabel)** + "Good" **(attributeAlabel)**	"PwID" + "Good"	"P**W**ID" **(targetAlabel)**	"P**W**ID" **(targetAlabel)** + "Good" **(attributeAlabel)**	"P**W**ID" + "Bom"
	Right “I”	"P**W**ID" **(targetAlabel)**	“Bad” **(attributeBlabel)**	"P**W**ID" **(targetAlabel)** + "Bad" **(attributeBlabel)**	"P**W**ID" + "Bad"	"PwID" **(targetBlabel)**	"PwID" **(targetBlabel)** + "Bad" **(attributeBlabel)**	"PwID" + "Bad"

Legend:

Target-categories:

- Persons **With** Impairments and Disabilities ("P**W**ID");
- Persons without Impairments and Disabilities ("PwID").

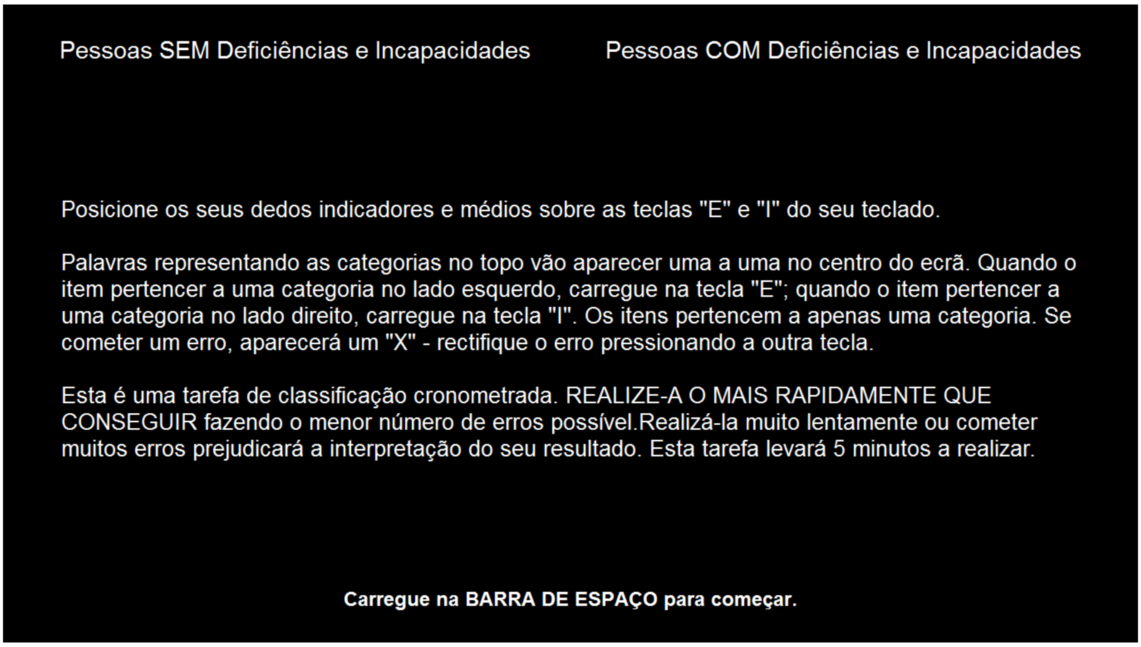
Attribute-categories:

- “Good”;
- “Bad”.

Appendix U

Disability Attitudes IAT - 7 Block Instructions Screenshots (Incompatible first).

Block 1 – Initial target-concept discrimination.
Instructions



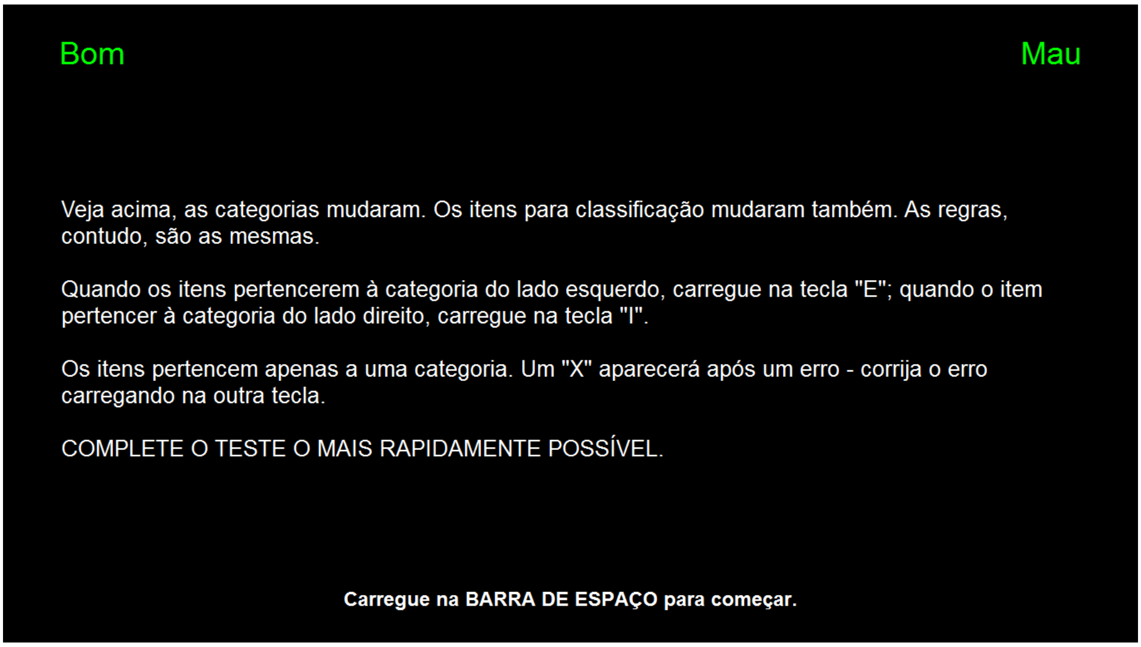
Posicione os seus dedos indicadores e médios sobre as teclas "E" e "I" do seu teclado.

Palavras representando as categorias no topo vão aparecer uma a uma no centro do ecrã. Quando o item pertencer a uma categoria no lado esquerdo, carregue na tecla "E"; quando o item pertencer a uma categoria no lado direito, carregue na tecla "I". Os itens pertencem a apenas uma categoria. Se cometer um erro, aparecerá um "X" - rectifique o erro pressionando a outra tecla.

Esta é uma tarefa de classificação cronometrada. REALIZE-A O MAIS RAPIDAMENTE QUE CONSEGUIR fazendo o menor número de erros possível.Realizá-la muito lentamente ou cometer muitos erros prejudicará a interpretação do seu resultado. Esta tarefa levará 5 minutos a realizar.

Carregue na BARRA DE ESPAÇO para começar.

Block 2 – Associated atribute discrimination
Instructions



Veja acima, as categorias mudaram. Os itens para classificação mudaram também. As regras, contudo, são as mesmas.

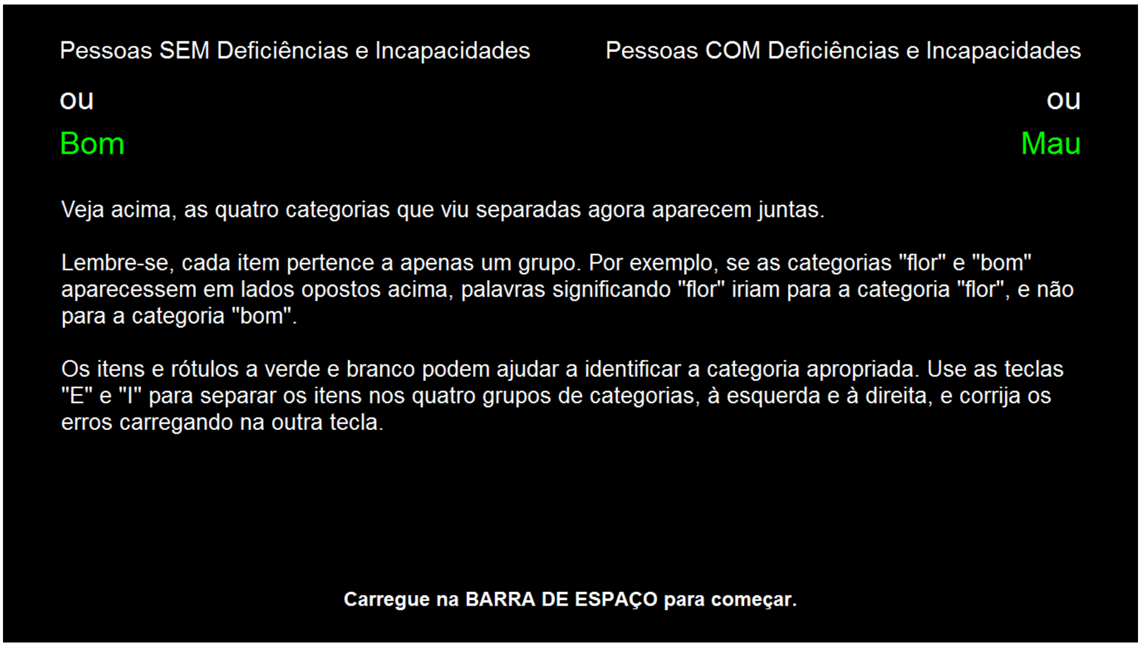
Quando os itens pertencerem à categoria do lado esquerdo, carregue na tecla "E"; quando o item pertencer à categoria do lado direito, carregue na tecla "I".

Os itens pertencem apenas a uma categoria. Um "X" aparecerá após um erro - corrija o erro carregando na outra tecla.

COMPLETE O TESTE O MAIS RAPIDAMENTE POSSÍVEL.

Carregue na BARRA DE ESPAÇO para começar.

Block 3 - Practice – Initial combined task
Instructions



Pessoas SEM Deficiências e Incapacidades
ou
Bom

Pessoas COM Deficiências e Incapacidades
ou
Mau

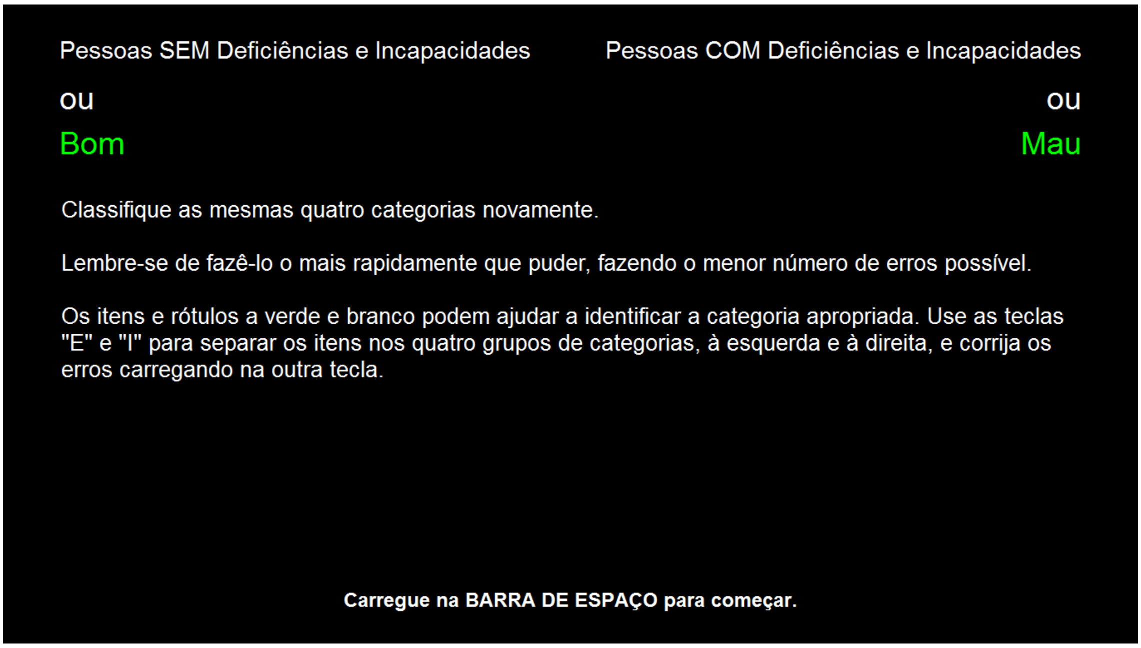
Veja acima, as quatro categorias que viu separadas agora aparecem juntas.

Lembre-se, cada item pertence a apenas um grupo. Por exemplo, se as categorias "flor" e "bom" aparecessem em lados opostos acima, palavras significando "flor" iriam para a categoria "flor", e não para a categoria "bom".

Os itens e rótulos a verde e branco podem ajudar a identificar a categoria apropriada. Use as teclas "E" e "I" para separar os itens nos quatro grupos de categorias, à esquerda e à direita, e corrija os erros carregando na outra tecla.

Carregue na BARRA DE ESPAÇO para começar.

Block 4 - Test – Initial combined task
Instructions



Pessoas SEM Deficiências e Incapacidades
ou
Bom

Pessoas COM Deficiências e Incapacidades
ou
Mau

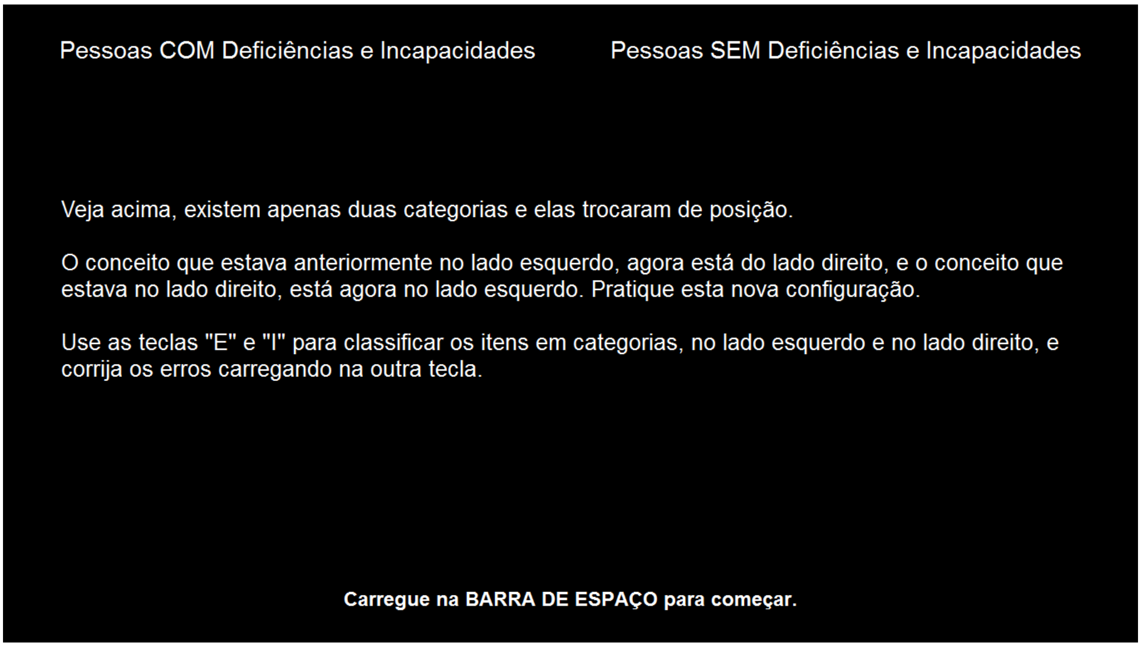
Classifique as mesmas quatro categorias novamente.

Lembre-se de fazê-lo o mais rapidamente que puder, fazendo o menor número de erros possível.

Os itens e rótulos a verde e branco podem ajudar a identificar a categoria apropriada. Use as teclas "E" e "I" para separar os itens nos quatro grupos de categorias, à esquerda e à direita, e corrija os erros carregando na outra tecla.

Carregue na BARRA DE ESPAÇO para começar.

Block 5 – Reversed target - concept discrimination
Instructions



Pessoas COM Deficiências e Incapacidades

Pessoas SEM Deficiências e Incapacidades

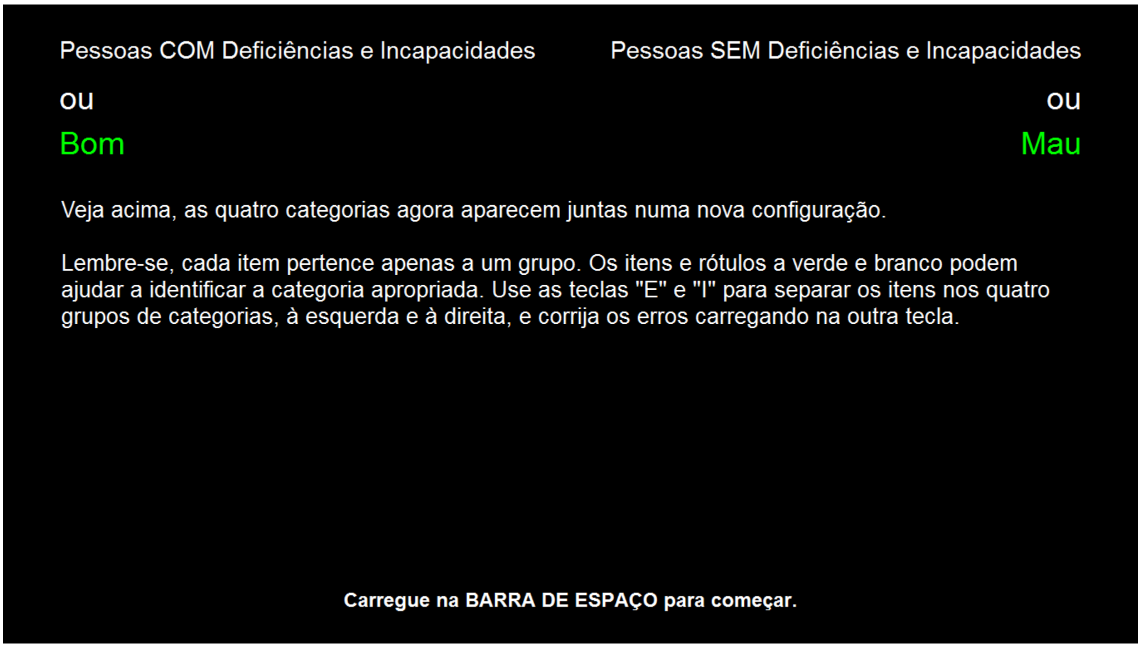
Veja acima, existem apenas duas categorias e elas trocaram de posição.

O conceito que estava anteriormente no lado esquerdo, agora está do lado direito, e o conceito que estava no lado direito, está agora no lado esquerdo. Pratique esta nova configuração.

Use as teclas "E" e "I" para classificar os itens em categorias, no lado esquerdo e no lado direito, e corrija os erros carregando na outra tecla.

Carregue na BARRA DE ESPAÇO para começar.

Block 6 - Practice – Reversed combined task
Instructions



Pessoas COM Deficiências e Incapacidades
ou
Bom

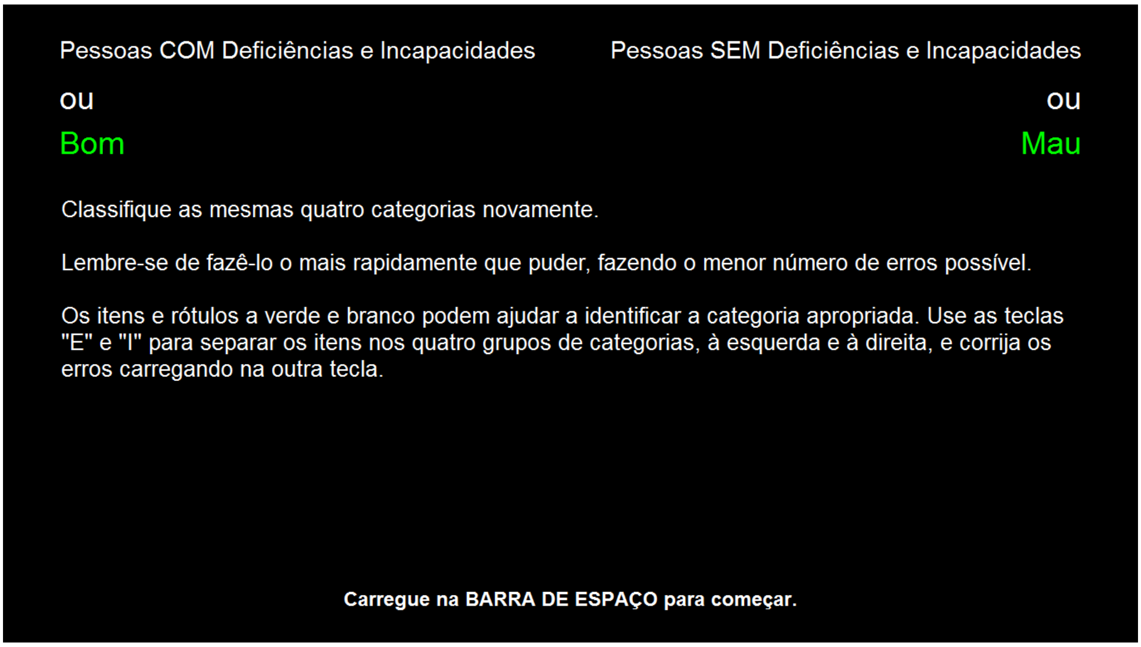
Pessoas SEM Deficiências e Incapacidades
ou
Mau

Veja acima, as quatro categorias agora aparecem juntas numa nova configuração.

Lembre-se, cada item pertence apenas a um grupo. Os itens e rótulos a verde e branco podem ajudar a identificar a categoria apropriada. Use as teclas "E" e "I" para separar os itens nos quatro grupos de categorias, à esquerda e à direita, e corrija os erros carregando na outra tecla.

Carregue na BARRA DE ESPAÇO para começar.

Block 7 – Test – Reversed combined task
Instructions



Pessoas COM Deficiências e Incapacidades
ou
Bom

Pessoas SEM Deficiências e Incapacidades
ou
Mau

Classifique as mesmas quatro categorias novamente.

Lembre-se de fazê-lo o mais rapidamente que puder, fazendo o menor número de erros possível.

Os itens e rótulos a verde e branco podem ajudar a identificar a categoria apropriada. Use as teclas "E" e "I" para separar os itens nos quatro grupos de categorias, à esquerda e à direita, e corrija os erros carregando na outra tecla.

Carregue na BARRA DE ESPAÇO para começar.

Appendix V

Summary of the IAT Improved Scoring Algorithm (adapted from Lane, Banaji, Nosek, & Greenwald, 2007; p. 92).

1 - Delete trials greater than 10,000 milliseconds;

2 - Delete subjects for whom more than 10% of trials have latency less than 300 milliseconds;

3 - Compute the inclusive standard deviation for all trials in Blocks 3 and 6 and likewise for all trials in Blocks 4 and 7;

4 - Compute the mean latency for responses for each of Blocks 3, 4, 6 and 7;

5 - Compute the two mean differences ($\text{Mean}_{\text{Block6}}$ – $\text{Mean}_{\text{Block 3}}$) and ($\text{Mean}_{\text{Block 7}}$ – $\text{Mean}_{\text{Block4}}$);

6 - Divide each difference score by its associated inclusive standard deviation;

7 - D = the equal-weight average of the two resulting ratios.

Appendix W

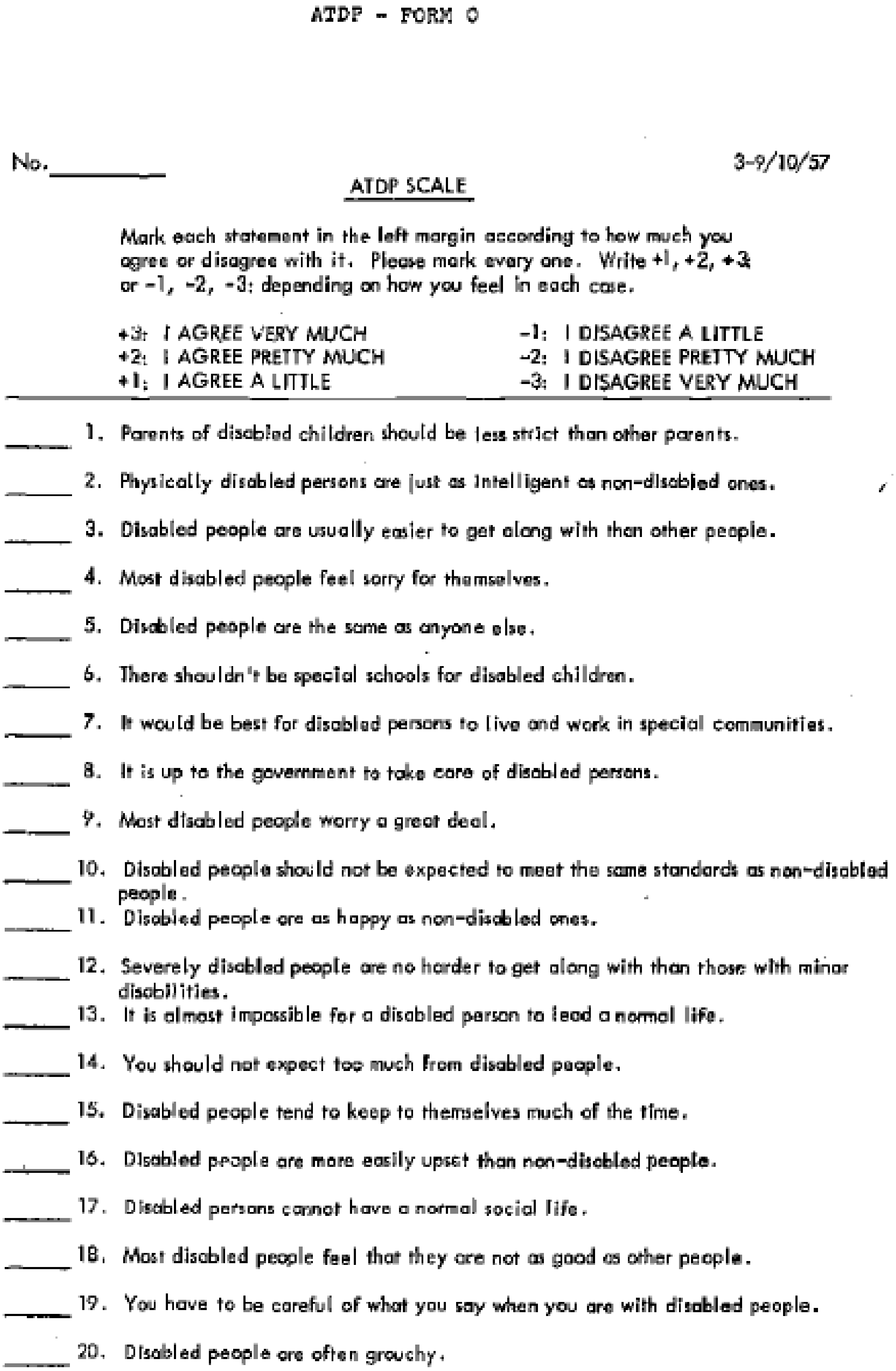
IAT D score descriptive statistics.

	N	Min.	Max.	Mean	SD	Skewness			Kurtosis		S-W
						Stat.	Std. Error	Crtcl Ratio	Statistic	Std. Error	Sig.*
IAT Score	49	-1,310	-0,168	-0,830	0,328	0,548	0,340	1,61	-0,801	0,668	0,008

*α=0.05

Appendix X

ATDP – O - Original English version (Yuker, Block, & Campbell, 1960; as found in Yuker & Block, 1986)



ATDP - FORM O

No.________ 3-9/10/57

ATDP SCALE

Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one. Write +1, +2, +3: or -1, -2, -3: depending on how you feel in each case.

+3: I AGREE VERY MUCH
+2: I AGREE PRETTY MUCH
+1: I AGREE A LITTLE

-1: I DISAGREE A LITTLE
-2: I DISAGREE PRETTY MUCH
-3: I DISAGREE VERY MUCH

______ 1. Parents of disabled children should be less strict than other parents.

______ 2. Physically disabled persons are just as intelligent as non-disabled ones.

______ 3. Disabled people are usually easier to get along with than other people.

______ 4. Most disabled people feel sorry for themselves.

______ 5. Disabled people are the same as anyone else.

______ 6. There shouldn't be special schools for disabled children.

______ 7. It would be best for disabled persons to live and work in special communities.

______ 8. It is up to the government to take care of disabled persons.

______ 9. Most disabled people worry a great deal.

______ 10. Disabled people should not be expected to meet the same standards as non-disabled people.

______ 11. Disabled people are as happy as non-disabled ones.

______ 12. Severely disabled people are no harder to get along with than those with minor disabilities.

______ 13. It is almost impossible for a disabled person to lead a normal life.

______ 14. You should not expect too much from disabled people.

______ 15. Disabled people tend to keep to themselves much of the time.

______ 16. Disabled people are more easily upset than non-disabled people.

______ 17. Disabled persons cannot have a normal social life.

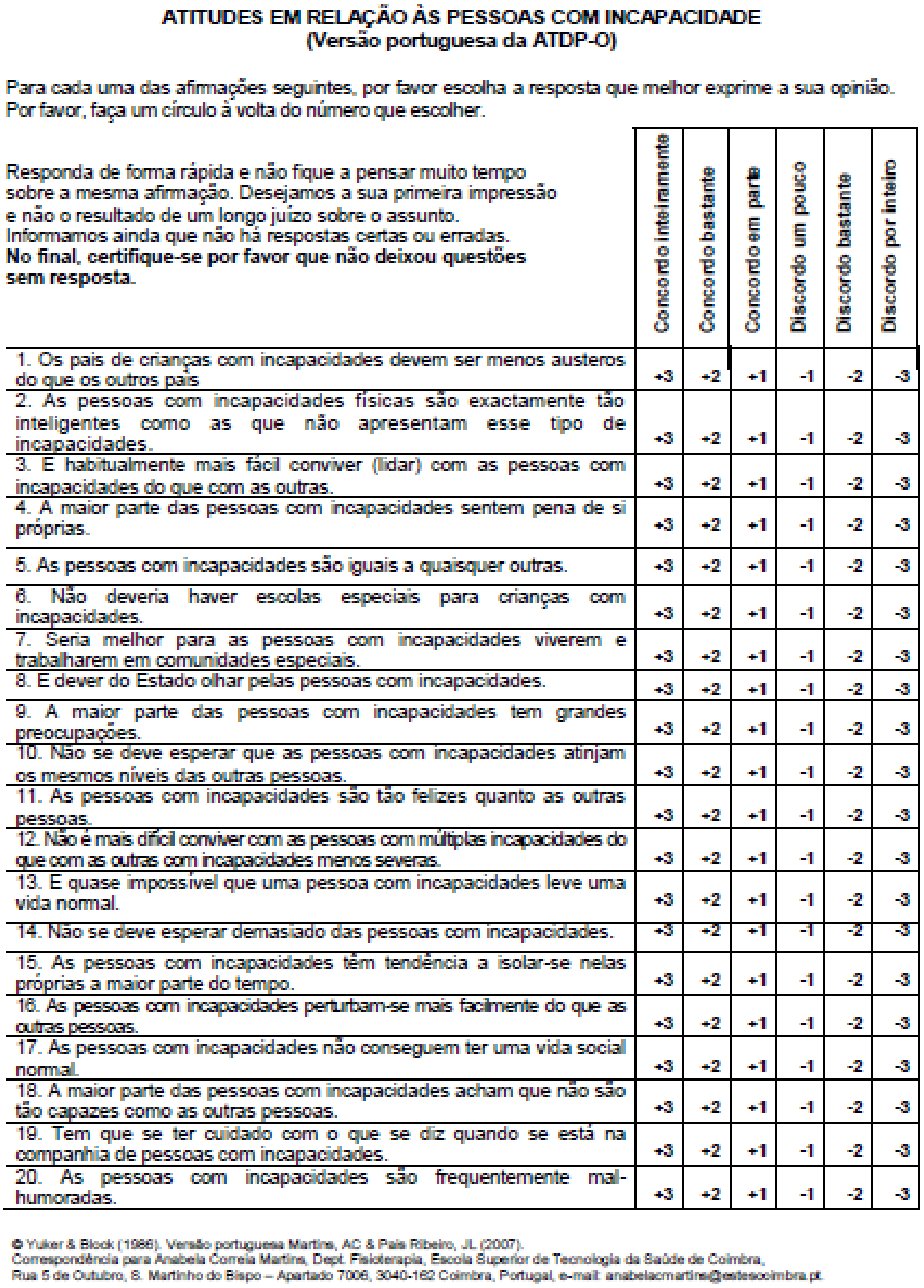
______ 18. Most disabled people feel that they are not as good as other people.

______ 19. You have to be careful of what you say when you are with disabled people.

______ 20. Disabled people are often grouchy.

Appendix Y

Portuguese Version of the ATDP-O.



ATITUDES EM RELAÇÃO ÀS PESSOAS COM INCAPACIDADE
(Versão portuguesa da ATDP-O)

Para cada uma das afirmações seguintes, por favor escolha a resposta que melhor exprime a sua opinião. Por favor, faça um círculo à volta do número que escolher.

Responda de forma rápida e não fique a pensar muito tempo sobre a mesma afirmação. Desejamos a sua primeira impressão e não o resultado de um longo juízo sobre o assunto. Informamos ainda que não há respostas certas ou erradas. **No final, certifique-se por favor que não deixou questões sem resposta.**

	Concordo inteiramente	Concordo bastante	Concordo em parte	Discordo um pouco	Discordo bastante	Discordo por inteiro
1. Os pais de crianças com incapacidades devem ser menos austeros do que os outros pais	+3	+2	+1	-1	-2	-3
2. As pessoas com incapacidades físicas são exactamente tão inteligentes como as que não apresentam esse tipo de incapacidades.	+3	+2	+1	-1	-2	-3
3. E habitualmente mais fácil conviver (lidar) com as pessoas com incapacidades do que com as outras.	+3	+2	+1	-1	-2	-3
4. A maior parte das pessoas com incapacidades sentem pena de si próprias.	+3	+2	+1	-1	-2	-3
5. As pessoas com incapacidades são iguais a quaisquer outras.	+3	+2	+1	-1	-2	-3
6. Não deveria haver escolas especiais para crianças com incapacidades.	+3	+2	+1	-1	-2	-3
7. Seria melhor para as pessoas com incapacidades viverem e trabalharem em comunidades especiais.	+3	+2	+1	-1	-2	-3
8. E dever do Estado olhar pelas pessoas com incapacidades.	+3	+2	+1	-1	-2	-3
9. A maior parte das pessoas com incapacidades tem grandes preocupações.	+3	+2	+1	-1	-2	-3
10. Não se deve esperar que as pessoas com incapacidades atinjam os mesmos níveis das outras pessoas.	+3	+2	+1	-1	-2	-3
11. As pessoas com incapacidades são tão felizes quanto as outras pessoas.	+3	+2	+1	-1	-2	-3
12. Não é mais difícil conviver com as pessoas com múltiplas incapacidades do que com as outras com incapacidades menos severas.	+3	+2	+1	-1	-2	-3
13. E quase impossível que uma pessoa com incapacidades leve uma vida normal.	+3	+2	+1	-1	-2	-3
14. Não se deve esperar demasiado das pessoas com incapacidades.	+3	+2	+1	-1	-2	-3
15. As pessoas com incapacidades têm tendência a isolar-se nelas próprias a maior parte do tempo.	+3	+2	+1	-1	-2	-3
16. As pessoas com incapacidades perturbam-se mais facilmente do que as outras pessoas.	+3	+2	+1	-1	-2	-3
17. As pessoas com incapacidades não conseguem ter uma vida social normal.	+3	+2	+1	-1	-2	-3
18. A maior parte das pessoas com incapacidades acham que não são tão capazes como as outras pessoas.	+3	+2	+1	-1	-2	-3
19. Tem que se ter cuidado com o que se diz quando se está na companhia de pessoas com incapacidades.	+3	+2	+1	-1	-2	-3
20. As pessoas com incapacidades são frequentemente mal-humoradas.	+3	+2	+1	-1	-2	-3

© Yuker & Block (1986). Versão portuguesa Martins, AC & Pais Ribeiro, JL (2007).
Correspondência para Anabela Correia Martins, Dept. Fisioterapia, Escola Superior de Tecnologia da Saúde de Coimbra,
Rua 5 de Outubro, S. Martinho do Bispo – Apartado 7006, 3040-162 Coimbra, Portugal, e-mail: anabelacmartins@estescoimbra.pt

Appendix Z

ATDP – O – Adaptation of the Portuguese Version for use in the present investigation.

Para cada uma das afirmações seguintes escolha, por favor, a resposta que melhor exprime a sua opinião.

Responda de forma rápida e não fique a pensar muito tempo sobre a mesma afirmação. Desejamos a sua primeira impressão e não o resultado de um longo juízo sobre o assunto.

Note que apenas lhe é pedida a sua opinião honesta, pelo que não há respostas certas ou erradas.

No final, certifique-se, por favor, de que não deixou questões sem resposta.

Assinale as suas respostas com um X, por favor.

	Discordo por inteiro **-3**	Discordo bastante **-2**	Discordo um pouco **-1**	Concordo em parte **+1**	Concordo bastante **+2**	Concordo inteiramente **+3**
1. Os pais de crianças com deficiências e incapacidades devem ser menos austeros com os seus filhos do que os outros pais.	○	○	○	○	○	○
2. As pessoas com deficiências e incapacidades físicas são exactamente tão inteligentes como as pessoas sem deficiências e incapacidades.	○	○	○	○	○	○
3. É habitualmente mais fácil conviver com as pessoas com deficiências e incapacidades do que com as outras pessoas.	○	○	○	○	○	○
4. A maior parte das pessoas com deficiências e incapacidades sente pena de si própria.	○	○	○	○	○	○
5. As pessoas com deficiências e incapacidades são iguais a quaisquer outras pessoas.	○	○	○	○	○	○
6. Não deveria haver escolas especiais para crianças com deficiências e incapacidades.	○	○	○	○	○	○
7. Seria melhor para as pessoas com deficiências e incapacidades viverem e trabalharem em comunidades especiais.	○	○	○	○	○	○
8. É dever do Estado olhar pelas pessoas com deficiências e incapacidades.	○	○	○	○	○	○
9. A maior parte das pessoas com deficiências e incapacidades preocupa-se muito.	○	○	○	○	○	○

	Discordo por inteiro -3	Discordo bastante -2	Discordo um pouco -1	Concordo em parte +1	Concordo bastante +2	Concordo inteiramente +3
10. Não se deve esperar que as pessoas com deficiências e incapacidades atinjam os mesmos níveis de desempenho das outras pessoas.	○	○	○	○	○	○
11. As pessoas com deficiências e incapacidades são tão felizes quanto as outras pessoas.	○	○	○	○	○	○
12. Não é mais difícil conviver com as pessoas com deficiências e incapacidades graves do que com as que têm deficiências e incapacidades menos severas.	○	○	○	○	○	○
13. É quase impossível que uma pessoa com deficiências e incapacidades tenha uma vida normal.	○	○	○	○	○	○
14. Não se deve esperar demasiado das pessoas com deficiências e incapacidades.	○	○	○	○	○	○
15. As pessoas com deficiências e incapacidades têm tendência a isolar-se em si próprias a maior parte do tempo.	○	○	○	○	○	○
16. As pessoas com deficiências e incapacidades perturbam-se mais facilmente do que as outras pessoas.	○	○	○	○	○	○
17. As pessoas com deficiências e incapacidades não conseguem ter uma vida social normal.	○	○	○	○	○	○
18. A maior parte das pessoas com deficiências e incapacidades acha que não é tão capaz como as outras pessoas.	○	○	○	○	○	○
19. Tem de se ter cuidado com o que se diz quando se está na companhia de pessoas com deficiências e incapacidades.	○	○	○	○	○	○
20. As pessoas com deficiências e incapacidades estão frequentemente mal-humoradas.	○	○	○	○	○	○

Original instrument by Yuker, Block, & Campbell (1960; as found in Yuker & Block, 1986).
Adapted from the Portuguese version by Martins and Pais- Ribeiro (2007).

Appendix AA

ATDP-O score descriptive statistics and normality tests.

	N	Min.	Max.	Mean	SD	Skw			Krt		S-W
						Statistic	Std. Error	Critical Ratio	Statistic	Std. Error	Sig.*
ATDP Score	49	33	80	60.20	9.973	-0,363	0,340	-1,067	0,028	0,668	0,786

*α=0.05

Appendix AB

Contextualized contact descriptive statistical analysis regarding four relationship types.

Contact with co-workers with impairment(s) and disability(ies). In what concerns *quantity of contact*, all but one participant reported having direct contact with any co-workers with impairments and disabilities. From those who had, the amount of contact in this type of relationship averaged 7,52 (SD = 0,899), representing a very high frequency of direct contact, located between “A few days per week” and “Every day” (7 and 8 codes, respectively); in addition, this scale ranged effectively between 3 and 8, instead of along its full length. This result is coherent with the frequency distribution of the respondents’ answers whose majority (63,3%) indicated having a daily contact with colleagues with impairment(s) and disability(ies); in addition, this scale ranged effectively between 3 and 8, instead of along its full length. Furthermore, this is a very strongly asymmetric distribution directed towards the right end of the scale (Sk=-3,274), significantly deviated from the normal distribution as the Shapiro-Wilk Test and the critical ratio demonstrate, and also indicating an almost completely homogenous experience of contact among all the participants in this relationship type, as the standard deviation from the mean is also relatively low.

Table Y.1. *Co-workers with impairments and disabilities - amount and quality of contact descriptives and normality tests.*

	N		**Min.**	**Max.**	**Mean**	**SD**	**Skw**			**Krt**		**S-W**
	V	**M**					**Statistic**	**Std. Error**	**Critical Ratio**	**Statistic**	**Std. Error**	**Sig.***
Amount	48	1	3	8	7,52	0,899	-3,274	0,343	-9,545	13,860	0,674	<0,001
Quality	48	1	2	7	6,25	1,139	-1,689	0,343	-4,924	2,962	0,674	<0,001

*α=0.05

Regarding *quality of contact*[1], participant’s subjective ratings averaged 6,25 (SD=1,139), hence indicating high levels of positivity in their relationships with these colleagues. This scale also has minimum and maximum values which do not correspond to its extremes. Only one participant reported quality of contact below the neutral point (4) meaning that the scale ranged between this point and 7, the right end point indicating the most positive possible answer (59,2% of the sample indicated very positive relationships). In addition, the reported standard deviation value suggests that the participants’ experiences regarding quality of contact are not as homogeneous as the frequency ratings, indicating more variability in the experiences with co-workers with impairments and disabilities frequencies.

---

[1] When participants considered they had contacted with equal frequency with several colleagues with disabilities, they were instructed to choose only one of them to answer the questions about their situation, age group and quality of the relationship, based on any relevant personal criteria (no guidelines regarding these were given). This instruction was repeated whenever the same issue was raised in relation to any other type of relationship (this instruction was stated in the questionnaire).

Furthermore, this is a very strongly asymmetric distribution directed towards the right end of the scale (Sk=-3,274), also significantly deviated from the normal distribution and thus pointing to an almost completely homogenous experience of contact among all the participants in this relationship type, as the standard deviation from the mean is also relatively low.

Contact with clients with impairment(s) and disability(ies). All the participants have direct contact with the clients with impairments and disabilities served by the organization's centres they work in. Therefore, it is not surprising that the *amount of contact* in this type of relationship averaged 7,73 (SD = 0,758), representing a very high frequency of direct contact, as it corresponds to a very close position to the scale's right extreme "Every day" (code 8); in addition, participants' answers effectively ranged between 5 and 8.. This is coherent with the frequency distribution of the respondents' answers; the vast majority (85,7%) reported having a daily contact with clients with impairment(s) and disability(ies). Furthermore, this is a very strongly asymmetric distribution directed towards the right end of the scale (Sk=-3,105), significantly deviated from the normal distribution, also indicating an almost completely homogenous experience of contact among all the participants in this relationship type, as the standard deviation from the mean is also relatively low, and as had already been observed in relation to the frequencies distribution of the latter relationship type.

Table Y.2. *Clients with impairments and disabilities - amount and quality of contact descriptives and normality tests.*

	N		**Min.**	**Max.**	**Mean**	**SD**	**Skw**			**Krt**		**S-W**
	V	**M**					**Statistic**	**Std. Error**	**Critical Ratio**	**Statistic**	**Std. Error**	**Sig.***
Amount	49	0	5	8	7,73	0,758	-3,105	0,340	-9,132	8,925	0,668	<0,001
Quality	49	0	3	7	6,20	0,912	-1,455	0,340	-4,279	2,576	0,668	<0,001

*α=0.05

Concerning *contact quality ratings*, participant's subjective ratings averaged 6,20 (SD=0,912), hence suggesting high levels of positivity in their relationships with clients, which is also supported by this variable highly asymmetric distribution, significantly deviation from the normal, and likewise directed towards the right end of the scale, as the skewness statistic (Sk=-1,455) and the critical ratio also show (Sk/Std.Err.Sk=-4,279). This scale also has minimum and maximum values which do not correspond to its extremes; all the participants but one reported quality of contact above the neutral point, what means that the scale actually ranged between a neutral stance and the most positive possible answer (42,9% of the sample indicated very positive relationships).

Contact with friends with impairment(s) and disability(ies). More than half of the sample reported having a friend with impairments and disabilities (55,1%). In this type of relationship, the *amount of contact* averaged 4,85 (SD = 1,975), located between "Once per month" and "A few times per month" (4 and 5 codes, respectively), and therefore representing a more moderate frequency of direct contact when compared to the other two types of relationship. This result is coherent with the frequency distribution of the responses given; the most part of these respondents' (20,4%) indicated being with their friends with impairment(s) and disability(ies) “A few times per year”, and the answers were distributed along the whole extension of the scale; only one participant reported never having contacted any of his/her friends with impairments and disabilities during the last year. This was not a very asymmetric distribution and therefore, is not significantly deviated from the normal distribution (Sk/Std.Err.Sk=0,134), suggesting an heterogeneous experience of contact among all the participants in this relationship type, as the standard deviation from the mean is also relatively high (almost two SD’s).

Table Y.3. *Friends with impairments and disabilities - amount and quality of contact descriptives and normality tests.*

	N		Min.	Max.	Mean	SD	Skw			Krt		S-W
	V	M					Statistic	Std. Error	Critical Ratio	Statistic	Std. Error	Sig.*
Amount	27	22	1	8	4,85	1,975	0,060	0,448	0,134	-1,203	0,872	<0,001
Quality	26	23	5	7	6,38	0,697	-0,703	0,456	1,542	-0,575	0,887	<0,001

*α=0.05

In what refers to *quality of contact*, participant’s subjective ratings averaged 6,38 (SD=0,697), hence indicating elevated values of positivity in their relationships with these friends, which is also supported by this variable’s asymmetry, also directed towards the right end of the scale, although not significantly deviated from the normal distribution, as the skewness statistic (Sk=-0,703) and the critical ratio also demonstrate (Sk/Std.Err.Sk=-1,542). There was not a single participant reporting quality of contact below 5 so this scale has minimum and maximum values that do not correspond to its extremes; it actually ranged between that point and 7, the most positive possible answer (50% indicated very positive relationships). In this line, the reported standard deviation value suggests that the participants’ experiences are somewhat consensual.

Contact with family members with impairment(s) and disability(ies). Only 36,7% of this study’s sample indicated having a family member in this situation. The *amount of contact* in this type of relationship averaged 5,00 (SD = 1,970), representing a moderate frequency of direct contact, as it corresponds to the “A few times per month” point of the scale (coded 5); participants’ answers effectively ranged between 2 and 8, with 61,11% of those with a family member with impairments and disabilities reporting frequencies of contact equal or above 5, and the remaining 38,88% indicating less frequent contacts. In addition, this is not a very asymmetric distribution, nor is it significantly deviated from the normal distribution as the critical ratio and the Shapiro-Wilk result test show. The standard deviation is also relatively high (almost two SD’s), thus suggesting a heterogeneous experience of contact among all the participants in this relationship type.

Table Y.4. *Family members with impairments and disabilities - amount and quality of contact descriptives and normality tests.*

	N		Min.	Max.	Mean	SD	Skw			Krt		S-W
	V	M					Statistic	Std. Error	Critical Ratio	Statistic	Std. Error	Sig.*

Amount	18	31	2	8	5,00	1,970	0,260	0,536	0,485	-1,177	1,038	0,066
Quality	18	31	5	7	6,61	0,698	-1,613	0,536	-3,01	1,405	1,038	<0,001

*α=0.05

As to what respects *quality of contact*, participants' subjective ratings averaged 6,61 (SD=0,698), thus indicating high levels of positivity in their relationships with family members with impairments and disabilities, which is also supported by this variable's highly asymmetric distribution, significantly deviated from the normal, and likewise directed towards the right end of the scale, as the skewness statistic (Sk=-1,613), the critical ratio also show (Sk/Std.Err.Sk=-3,009) and the Shapiro-Wilk test demonstrate. This scale also has minimum and maximum values which do not correspond to its extremes; all the participants indicated quality of contact equal or above to 5, what means that the scale ranged between this point and the most positive possible answer (7). The majority of these participants – 72,2% - indicated very positive relationships with the most contacted family member).

Appendix AC

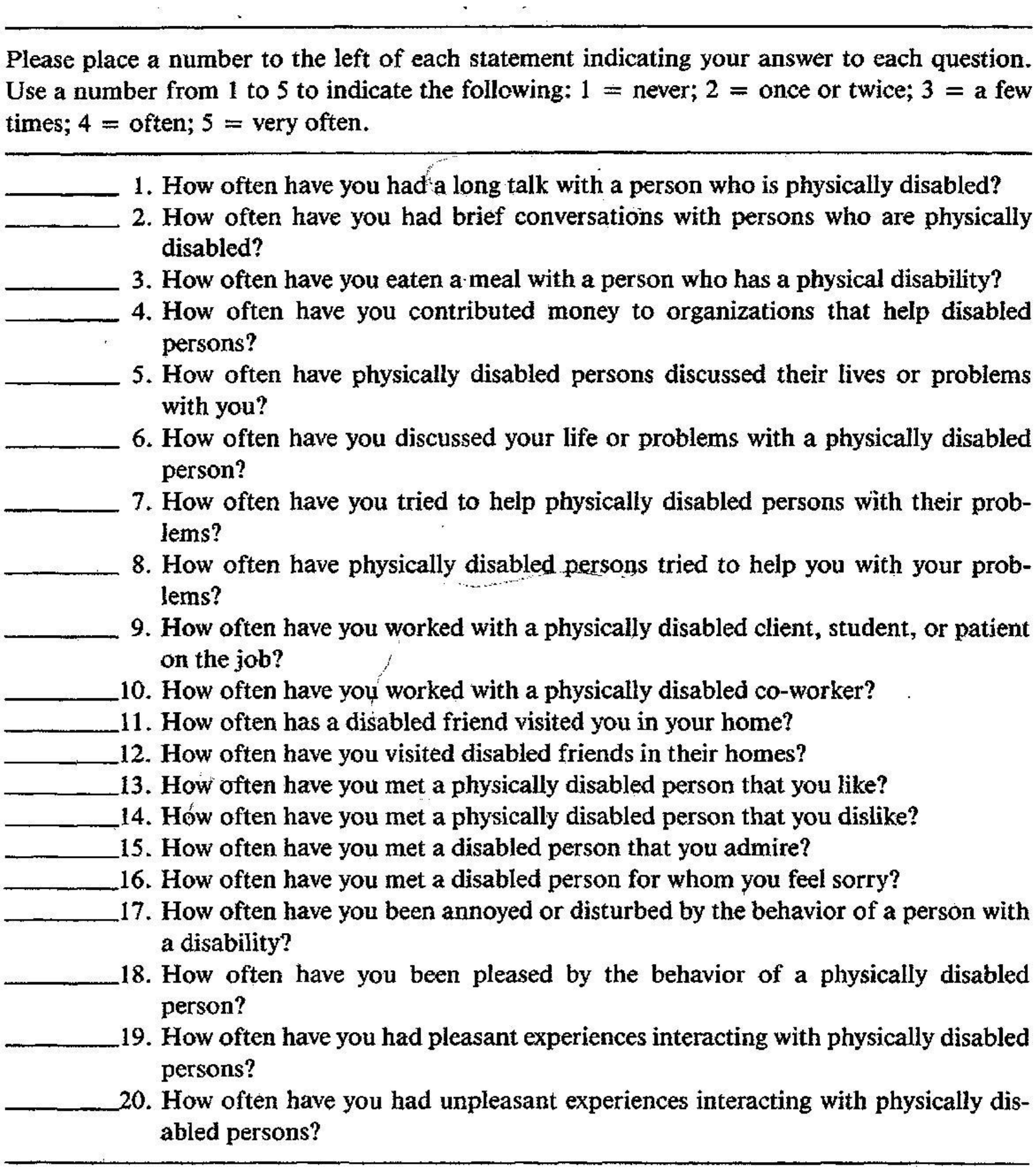
Contact amount and quality indexes descriptive statistics.

	N		Min.	Max.	Mean	SD	Skw			Krt		S-W
	V	M					Statistic	Std. Error	Critical Ratio	Statistic	Std. Error	Sig.*
Amount	49	0	2,00	7,50	5,18	1,08	-0,119	0,340	-0,35	0,526	0,668	0,077
Quality	49	0	2,25	7,00	4,82	1,29	0,139	0,340	0,41	-1,034	0,668	0,027

*α=0.01

Appendix AD

Contact with Disabled Persons (CDP) Scale (Yuker &Hurley, 1987, p.149)



Please place a number to the left of each statement indicating your answer to each question. Use a number from 1 to 5 to indicate the following: 1 = never; 2 = once or twice; 3 = a few times; 4 = often; 5 = very often.

__________ 1. How often have you had a long talk with a person who is physically disabled?
__________ 2. How often have you had brief conversations with persons who are physically disabled?
__________ 3. How often have you eaten a meal with a person who has a physical disability?
__________ 4. How often have you contributed money to organizations that help disabled persons?
__________ 5. How often have physically disabled persons discussed their lives or problems with you?
__________ 6. How often have you discussed your life or problems with a physically disabled person?
__________ 7. How often have you tried to help physically disabled persons with their problems?
__________ 8. How often have physically disabled persons tried to help you with your problems?
__________ 9. How often have you worked with a physically disabled client, student, or patient on the job?
__________10. How often have you worked with a physically disabled co-worker?
__________11. How often has a disabled friend visited you in your home?
__________12. How often have you visited disabled friends in their homes?
__________13. How often have you met a physically disabled person that you like?
__________14. How often have you met a physically disabled person that you dislike?
__________15. How often have you met a disabled person that you admire?
__________16. How often have you met a disabled person for whom you feel sorry?
__________17. How often have you been annoyed or disturbed by the behavior of a person with a disability?
__________18. How often have you been pleased by the behavior of a physically disabled person?
__________19. How often have you had pleasant experiences interacting with physically disabled persons?
__________20. How often have you had unpleasant experiences interacting with physically disabled persons?

Appendix AE

CDP (Yuker & Hurley, 1987) - Proposed translation and adaptation for the Portuguese version.

Para cada uma das frases abaixo, escolha por favor a resposta que melhor exprime a sua situação.

Note que apenas lhe é pedida uma resposta honesta, pelo que não há respostas certas ou erradas.
No final, certifique-se, por favor, que não deixou questões sem resposta.

Assinale as suas respostas com um X, por favor.

	➊ **Nunca**	② **Uma ou duas vezes**	③ **Algumas vezes**	④ **Frequentemente**	➎ **Muito Frequentemente**
1. Com que frequência conversa por longos períodos de tempo com uma pessoa com deficiência(s) e incapacidade(s)?	①	②	③	④	⑤
2. Com que frequência conversa por curtos períodos de tempo com pessoas com deficiências e incapacidades?	①	②	③	④	⑤
3. Com que frequência toma uma refeição com uma pessoa com deficiência(s) e incapacidade(s)?	①	②	③	④	⑤
4. Com que frequência contribui com dinheiro para organizações que ajudam pessoas com deficiências e incapacidades?	①	②	③	④	⑤
5. Com que frequência pessoas com deficiências e incapacidades discutem as suas vidas ou problemas consigo?	①	②	③	④	⑤
6. Com que frequência discute a sua vida ou problemas com uma pessoa com deficiência(s) e incapacidade(s)?	①	②	③	④	⑤
7. Com que frequência tenta ajudar pessoas com deficiências e incapacidades com os seus problemas?	①	②	③	④	⑤
8. Com que frequência é que pessoas com deficiências e incapacidades o/a tentam ajudar com os seus problemas?	①	②	③	④	⑤

	① **Nunca**	② **Uma ou duas vezes**	③ **Algumas vezes**	④ **Frequentemente**	⑤ **Muito Frequentemente**
9. Com que frequência trabalha com um/a cliente, aluno/a, ou paciente com deficiência(s) e incapacidade(s) no seu trabalho?	①	②	③	④	⑤
10. Com que frequência trabalha com um/a colega de trabalho com deficiência(s) e incapacidade(s)?	①	②	③	④	⑤
11. Com que frequência recebe visitas de um/a amigo/a com deficiência(s) e incapacidade(s) em sua casa?	①	②	③	④	⑤
12. Com que frequência visita amigos/as com deficiências e incapacidades nas suas casas?	①	②	③	④	⑤
13. Com que frequência se encontra com uma pessoa com deficiência(s) e incapacidade(s) de quem gosta?	①	②	③	④	⑤
14. Com que frequência se encontra com uma pessoa com deficiência(s) e incapacidade(s) de quem não gosta?	①	②	③	④	⑤
15. Com que frequência se encontra com uma pessoa com deficiência(s) e incapacidade(s) que admira?	①	②	③	④	⑤
16. Com que frequência se encontra com uma pessoa com deficiência(s) e incapacidade(s) de quem sente pena?	①	②	③	④	⑤
17. Com que frequência se sente aborrecido/a ou perturbado/a com o comportamento de uma pessoa com deficiência(s) e incapacidade(s)?	①	②	③	④	⑤
18. Com que frequência se sente agradado com o comportamento de uma pessoa com deficiência(s) e incapacidade(s)?	①	②	③	④	⑤
19. Com que frequência tem experiências agradáveis ao interagir com pessoas com deficiências e incapacidades?	①	②	③	④	⑤
20. Com que frequência tem experiências desagradáveis ao interagir com pessoas com deficiências e incapacidades?	①	②	③	④	⑤

Appendix AF

CDP score descriptive statistics.

	N		Min.	Max.	Mean	SD	Skw			Krt		S-W
	V	M					Statistic	Std. Error	Critical Ratio	Statistic	Std. Error	Sig.*
CDP score	49	0	43	84	63,35	9,913	0,018	0,340	0,053	-0,294	0,668	0,853

*α=0.05

Appendix AG

Authorization request letter

ISCTE IUL
Escola de Ciências
Sociais e Humanas

Pedido de Autorização para Recolha de Dados para Trabalho de Investigação

Exma. Sr.ª [redacted]

Ana Sofia Anselmo dos Santos Gonçalves de Oliveira, Psicóloga, Membro Efectivo da Ordem dos Psicólogos Portugueses com Cédula Profissional n.º 8550, [redacted] encontrando-se a frequentar o Curso de Mestrado em Psicologia Social da Saúde no Instituto Superior de Ciências do Trabalho e da Empresa - Instituto Universitário de Lisboa (ISCTE-IUL), vem solicitar a V. Exa. autorização para a recolha de dados através da realização de tarefas computorizadas e resposta a questionários, a fim de serem utilizados na investigação e respetiva dissertação que se encontra a desenvolver, a qual está subordinada ao tema das atitudes em relação a pessoas adultas com deficiência e incapacidade. A referida investigação encontra-se a ser desenvolvida sob orientação da Professora Doutora Sibila Marques, e co-orientação do Professor Doutor Ricardo Rodrigues, docentes daquela instituição universitária.

Pretende-se, com este estudo, fazer o levantamento das atitudes que os profissionais que trabalham diretamente com pessoas com deficiência e incapacidade têm em relação a esta população, independentemente do tipo de deficiência e incapacidade, bem como estudar a influência de variáveis como a quantidade e qualidade de contacto com pessoas com deficiência, e a motivação para não responder de forma preconceituosa, e de que formas estão associadas a atitudes mais ou menos positivas. Este estudo pretende então contribuir para o aumento do conhecimento relativamente aos factores que podem, ou não, influenciar a saúde e qualidade de vida de pessoas com deficiência e incapacidade, revestindo-se ainda de particular importância por se tratar de uma área de investigação ainda pouco explorada quer ao nível internacional, quer ao nível do nosso país.

Problema e Objetivos

Apesar dos avanços civilizacionais relativamente à inclusão da população com deficiência e incapacidades, esta continua a não participar de forma plena na sociedade; é bastante difícil erradicar as atitudes negativas associadas a este grupo minoritário, sobretudo porque podem ser ativadas fora da consciência, com um grau de controlabilidade limitado, sendo expressas de forma subtil. O impacto negativo destas atitudes, implícitas, não é, contudo menor por comparação com as expressadas explicitamente, aparentemente menos frequentes, com consequências profundamente negativas, e a vários níveis, como a saúde e qualidade de vida (p.e. Emerson et al., 2011) ao impedirem a completa e efetiva participação destas pessoas na sociedade.

Mesmo os profissionais que trabalham com este grupo expressam atitudes explícitas e implícitas negativas, com consequências eventualmente graves na intervenção (p. e. Kaplan, 1982; citado por Pruett & Chan, 2006). Não se observa, contudo, um padrão consistente: há estudos em que o seu nível de preconceito negativo não diferiu significativamente do da população geral (negativo) por exemplo, e outros em que se verificou a situação inversa (p. e. Chan, Livneh, Pruett, Wang, & Zheng, 2009).

Parte da explicação relativamente a estas observações contraditórias poderá residir na massificação da utilização de métodos diretos na avaliação das atitudes, que elicitam a intervenção da consciência na avaliação das mesmas, o que pode levar à regulação deliberada da sua expressão, sobretudo quando o objeto atitudinal é sensível – como é o caso do grupo das pessoas com deficiência e incapacidade - e a expressão de atitudes explícitas, negativas, em relação ao mesmo, é sancionada socialmente (p. e. Dovidio, Pagotto & Hebl, 2011); estas metodologias são então particularmente sensíveis à influência do efeito de desejabilidade social, questionando-se assim a sua validade.

Foram então desenvolvidas medidas implícitas de avaliação de atitudes, as quais permitem capturar as representações estáveis e inconscientes de determinado objeto, sem recorrer à introspeção, o que as torna menos suscetíveis ao efeito da desejabilidade social (p.e. Antonak & Livneh, 2000); é disso exemplo o Teste de Associações Implícitas (TAI), existindo várias versões para avaliar as atitudes implícitas em relação a pessoas com deficiência e incapacidade (p. e. Pruett & Chan, 2006). Por estas razões serão utilizadas medidas implícitas para avaliação das atitudes implícitas dos profissionais em relação a esta população, a par de um questionário para avaliação das atitudes explícitas.

A investigação tem também identificado várias variáveis preditoras das atitudes explícitas e implícitas de profissionais que trabalham com pessoas com deficiência e incapacidades, cujo padrão não é igualmente consistente; nesta linha salientam-se o contacto prévio com elementos desta população, e a motivação interna e externa para controlar o preconceito, as quais irão ser avaliadas no presente estudo, de acordo com as assunções teóricas da Teoria do Contacto Intergrupal (p. e. Allport, 1954; citado por Pettigrew, 1998), e da conceptualização de Plant e Devine (1998), respetivamente, as quais, de acordo com a revisão realizada, nunca foram avaliadas conjuntamente nestes pressupostos.

A revisão de literatura revelou várias críticas recorrentes neste âmbito, uma das quais se refere à utilização mais frequente de amostras por conveniência de estudantes de cursos como terapia ocupacional, e não de profissionais efetivos que intervenham com aquela população, o que se pretende colmatar no presente estudo.

Para tal, pretende-se obter respostas às questões de investigação:

1. Quais as atitudes explícitas e implícitas dos profissionais que trabalham com pessoas adultas com deficiência e incapacidade em relação a esta população?
2. Quais os preditores das atitudes explícitas e implícitas dos profissionais que trabalham com pessoas adultas com deficiência e incapacidade em relação às mesmas?

Para dar resposta a estas questões, e com base na revisão de literatura realizada, a investigação basear-se-á nos seguintes objetivos gerais:

1. Identificar os efeitos dos preditores psicossociais (contato e motivação para não ser preconceituoso) nas atitudes explícitas e implícitas dos profissionais que trabalham, e não trabalham, com pessoas adultas com deficiência e incapacidade em relação a este grupo;
2. Saber até que ponto as atitudes explícitas de profissionais que trabalham, e que não trabalham, com pessoas adultas com deficiência e incapacidade se sobrepõem.

Pretende-se então, subsequentemente, cumprir os seguintes objetivos específicos:
1. Saber qual o impacto da qualidade e quantidade do contacto prévio com pessoas com deficiência e incapacidade nas atitudes implícitas e explícitas dos profissionais que trabalham, e não trabalham, com pessoas adultas com deficiência e incapacidade, em relação a esta população;
2. Explorar o efeito da motivação interna e externa para não responder de forma preconceituosa nas atitudes implícitas e explícitas dos profissionais, que trabalham, e não trabalham, com pessoas adultas com deficiência e incapacidade, em relação a esta população.

Metodologia a Adoptar

Participantes

Pretende-se constituir dois grupos: um de profissionais que trabalhem com pessoas adultas com deficiência e incapacidade – a recrutar em instituições que trabalhem com esta população - e outro de outros profissionais que não tenham contato com esta população – a recrutar noutro tipo de organismos. Pretende-se que ambas as amostras tenham 60 participantes e que, em média, tenham características semelhantes relativamente a variáveis demográficas como idade e nível académico e que, desta forma, se controle a variável "contato com pessoas com deficiência" (quantidade e qualidade). O principal objetivo é, ao contrário do que acontece com a maior parte dos estudos entretanto realizados neste âmbito, o de avaliar as atitudes de profissionais que se encontrem efetivamente a trabalhar com pessoas com deficiência e incapacidades, e não estudantes, assim como estabelecer um termo de comparação com outros que não tenham um contato frequente com esta população.

De modo a controlar os efeitos da desejabilidade social, e a potenciar a fidedignidade dos resultados de acordo com o enquadramento teórico, o procedimento implica que os participantes desconheçam, à partida, a verdadeira natureza e objetivos do estudo, pelo que o consentimento inicialmente obtido não será verdadeiramente informado. O *Código Deontológico da Ordem dos Psicólogos Portugueses (2011) obriga a que, nesta situação*: **1)** no fim da aplicação de todos os instrumentos, seja feito o *debriefing*, individual, revelando então a informação ocultada, procurando-se então, subsequentemente, a obtenção do consentimento informado, pelo que se oferece a possibilidade de recusa do participante em que os seus dados sejam utilizados, o que será escrupulosamente respeitado; e, **2)** se ofereçam esclarecimentos pós-investigação.

De modo a atingir-se os referidos objetivos, pretende-se aplicar vários instrumentos de avaliação das variáveis em estudo:

- Teste de Associações Implícitas (TAI) - pressupõe a realização de uma tarefa através de um programa informático que regista tempos de reacção a determinados estímulos relacionados, ou não, com deficiência e incapacidade. São duas as tarefas com estas características.

- Atitudes em Relação às Pessoas com Incapacidade (Martins & Pais Ribeiro, 2007; versão portuguesa do instrumento *Attitudes toward Disabled Persons Scale – Form O*, de Yuker & Block, 1960) – formato de papel e lápis;

- Escala de Contacto com Pessoas com Deficiência (Tradução do original *Contact with Disabled Persons Scale*, de Yuker & Hurley, 1987) – formato de papel e lápis;

- Questionário para avaliar a motivação para não responder de forma preconceituosa (a decidir ainda que instrumento utilizar) – formato de papel e lápis;

- Questionário para recolha de dados sóciodemográficos relevantes (p.e. data de nascimento, género, habilitações literárias e número de anos de trabalho com pessoas com deficiência) – formato de papel e lápis.

No que se refere às condições de aplicação dos instrumentos acima referidos, a mesma é individual, pelo que se solicita ainda, se possível, um espaço onde se possa proceder à mesma em condições de confidencialidade, e em que os participantes estejam sujeitos a níveis mínimos de distração, uma vez que quaisquer outros estímulos externos poderão influenciar os resultados, sobretudo no que se refere à tarefa realizada através do computador. Prevê-se que a aplicação do conjunto de todos os instrumentos referidos tenha uma duração que poderá variar entre 20 a 30 minutos.

Mais se informa que a metodologia adoptada assegurará a preservação da identidade e privacidade dos participantes, de harmonia com a Lei n.º 67/1998 – Lei da Protecção de Dados Pessoais, relativa à proteção das pessoas singulares no que respeita ao tratamento dos dados pessoais e à livre circulação desses dados –pelo que não se procederá à recolha de quaisquer informações que permitam identificar os participantes; pretende-se que a sua participação seja voluntária e anónima e será solicitado o devido consentimento informado a cada um, com o respeito devido pelos seus direitos, e igualmente de acordo com os princípios éticos preconizados pelo

Código Deontológico da Ordem dos Psicólogos Portugueses, o qual pressupõe ainda que lhes seja oferecida a possibilidade de conhecerem os resultados do estudo se assim o desejarem, sendo o contato de correio electrónico de contato fornecido para que o manifestem.

Atender-se-á igualmente à manutenção do anonimato da V/ instituição, a não ser que o contrário seja manifestado por parte de V. Exa.. Será enviado um exemplar do trabalho final se V. Exa. entender ser de interesse para a instituição que preside.

Serão igualmente prestados todos os esclarecimentos adicionais julgados necessários.

Lisboa, ____ de _______ de 20___.

A Mestranda	A Orientadora	O Co-orientador
______________________	______________________	______________________
(Ana Sofia A. Santos G. Oliveira)	(Sibila Marques)	(Ricardo Rodrigues)

Contactos:
Ana Sofia A. Santos G. Oliveira

Bairro General Daniel de Sousa, n.º35
2900-342 Setúbal

Telemóvel: 964 811 534

E-mail: asasg@iscte-iul.pt

Sibila Marques

Instituto Superior de Ciências do Trabalho e da Empresa
– Instituto Universitário de Lisboa

Escola de Ciências Sociais e Humanas
Departamento de Psicologia Social e das Organizações
Telefone: 21 046 41 28 | Extensão: 29 16 03

Avenida das Forças Armadas, 1649-026 Lisboa

E-mail: sibila.marques@iscte-iul.pt

Referências Bibliográficas

Antonak, R. F., & Livneh, H. (2000). Measurement of attitudes toward persons with disabilities. *Disability and Rehabilitation*, *22* (5), 211-224.

Chan, F., Livneh, H., Pruett, S., Wang, C., & Zheng, L. X. (2009). Societal attitudes toward disability: Concepts, measurements, and interventions. In F. Chan, E. S. Cardoso, & J. A. Chronister (Eds.), *Understanding Psychosocial Adjustment to Chronic Ilness and Disability: A Handbook for Evidence-Based Practicioners in Rehabilitation*. New York: Springer Publishing Company.

Dovidio, J. F., Pagotto,L., & Hebl, M. R. (2011). Implicit attitudes and discrimination against people with physical disabilities, in Wiener, R., & Willborn, S. L. (Eds.) Disability and Aging Discrimination: Perspectives in Law and Psychology (pp. 157-183). Springer Science + Business Media: New York. (doi: 10.007/978-1-4419-6293-5_9).

Emerson, E., Madden, R., Graham, H., Llewellyn, G., Hatton, C., & Robertson, J. (2011). The health of disabled people and the social determinants of health. *Public Health*, *125*, 145-147.

Martins, A. C. , & Pais-Ribeiro, J. L. (2007). *Estudo de Adaptação do Questionário Atitudes em Relação às Pessoas com Incapacidade (Versão Portuguesa da ATDP-O)*. Comunicação em poster apresentada no X Congresso Internacional e Multidisciplinar do Centro de Psicopedagogia.

Ordem dos Psicólogos Portugueses (2011). *Código Deontológico*. Ordem dos Psicólogos Portugueses.

Pettigrew, T. F. (1998). Intergroup contact theory. *Annual Review of Psychology*, *49*, 65-85.

Plant, E. A., & Devine, P. G. (1998). Internal and external motivation to respond without prejudice. *Journal of Personality and Social Psychology*, *75*, 811-832.

Pruett, S. R., & Chan, F. (2006). The development and psychometric validation of the disability attitude implicit association test. *Rehabilitation Psychology*, *51* (3), 202-213.

Yuker, H. E., & Hurley, M. K. (1987). Contact with and Attitudes toward Persons with Disabilities: The Measurement of Intergroup Contact. *Rehabilitation Psychology, 32*(3), 145-154.

Appendix AH

Letter of Compromise

[redacted]

CARTA DE COMPROMISSO

Estudo de Investigação

[redacted], representada pelo seu Conselho Diretivo, [redacted], e o Instituto Superior de Ciências do Trabalho e da Empresa, representada pela Professora Doutora *Sibila Marques* e pelo Professor Doutor *Ricardo Rodrigues,* assumem nesta data a presente Carta de Compromisso, com validade até ao termo da realização do Estudo de Investigação "Atitudes em Relação a Pessoas Adultas com Deficiência e Incapacidade", que se rege pelas seguintes condições:

1. [redacted] assume a integração da Investigadora junto da equipa que diretamente for afeta à realização do Estudo em causa.
2. [redacted] monitoriza o decurso dos trabalhos junto da Investigadora/Instituto e do Interlocutor do [redacted] onde decorre o Estudo.
3. A Investigadora/Instituto compromete-se a divulgar [redacted] um exemplar/relatório final do estudo.

Lisboa, [redacted]

[redacted]	Universidade/Instituto	Investigadora
[redacted]	______________________	______________________

Appendix AI

Pre-Debriefing Informed Consent Form

ISCTE IUL
Escola de Ciências
Sociais e Humanas

CONSENTIMENTO INFORMADO

O presente documento pretende explicar resumidamente os objectivos do estudo, seus procedimentos, riscos e benefícios.

1. Quais são os objectivos deste estudo?

Os objectivos desta investigação são: **(1)** aprofundar o conhecimento na área da Psicologia Social da Saúde no que se refere à forma como processamos informação em situações sociais; **(2)** estudar a influência de outras variáveis na forma como processamos essa informação.

2. Quais os procedimentos a realizar?

Ao aceitar participar neste estudo é foi convidado/a realizar, em primeiro lugar, uma tarefa computorizada de classificação de imagens e palavras em categorias e, em segundo, a preencher um questionário.

3. Quais são os possíveis benefícios, riscos e desconfortos associados à participação no estudo?

Não se antecipam quaisquer riscos para si ao participar, e o potencial desconforto prende-se sobretudo com o tempo necessário para a realização da tarefa computorizada e preenchimento do questionário – cerca de 30 a 35 minutos.

Por outro lado, ao participar na presente investigação estará a dar um importante contributo para o aumento do conhecimento numa área de investigação ainda pouco explorada quer internacionalmente, quer ao nível do nosso país.

4. Receberei algum pagamento?

Não. A sua participação neste estudo é voluntária, isto é, não há qualquer remuneração pela sua participação.

5. Quem devo procurar em caso de dúvidas e esclarecimentos?

Poderá obter mais informações sobre este estudo contactando a Dr.ª Ana Sofia Oliveira, responsável por este estudo, através do e-mail ana_sofia_oliveira@iscte-iul.pt. Caso seja do seu interesse, deixe o seu e-mail abaixo para receber algumas informações mais detalhadas sobre o estudo e instrumentos utilizados.

6. É garantida a confidencialidade?

Sim, a pesquisa é anónima. Todas as informações e opiniões serão tratadas de forma a garantir e salvaguardar a confidencialidade. **Garantem-se o anonimato e confidencialidade dos dados recolhidos, inclusivamente no que se refere à instituição em que trabalha, uma vez que não serão reunidas informações que o/a permitam identificar;**

A publicação dos dados recolhidos durante a investigação só poderá ter lugar **em publicações académicas e científicas** (em que se inclui a dissertação de mestrado a que se refere o presente estudo), e **sob a forma de análise estatística, a qual incidirá sobre o conjunto de todos os dados**, e **não em respostas individuais.**

7. Posso desistir da participação?

Sim. A qualquer momento poderá decidir não avançar com a sua participação no estudo sem necessidade de explicação. Tal obriga a que os seus dados não sejam utilizados, sendo os mesmos apagados na sua presença.

8. Consentimento:

Confirmo que li o conteúdo deste Termo de Consentimento Livre e Esclarecido e aceitei participar voluntariamente neste estudo. Ficaram claros para mim os objectivos da investigação, os procedimentos a adoptar, seus desconfortos e riscos, as garantias de confidencialidade e de esclarecimentos permanentes. Ficou claro também que a minha participação é isenta de despesas.

O/A participante

____

E-mail:
(A preencher apenas no caso de pretender receber mais informações sobre o estudo)

Data: _____/ _____/ 2014

QUESTIONÁRIO

Número de Participante

____

Data: ____ / ____ / 2014

Car@ participante,

Nesta segunda parte do estudo, estamos interessados em avaliar as suas atitudes e nível de contacto, e motivação para agir de forma não preconceituosa relativamente ao grupo social "Pessoas com Deficiências e Incapacidades".

Serão também recolhidos alguns dados sociodemográficos para caracterização da amostra.

A sua participação é muito importante.

O questionário é simples e o seu preenchimento demora, aproximadamente, *25 minutos*.

Relembramos que:

- a participação neste estudo é voluntária;
- não se antecipam quaisquer riscos para si caso opte por contribuir no preenchimento do questionário que se segue;
- se **garantem o anonimato e confidencialidade dos dados recolhidos, inclusivamente no que se refere à instituição em que trabalha, uma vez que não serão reunidas informações que o/a permitam identificar;**
- a **publicação dos dados recolhidos** só poderá ter lugar **em publicações científicas** (em que se inclui a dissertação de mestrado a que se refere o presente estudo), e **sob a forma de análise estatística**, **a qual incidirá sobre o conjunto de todos os dados**, e **não em respostas individuais.**
- poderá decidir não avançar com a sua participação no estudo em qualquer momento.

Gratos pela sua colaboração,

Ana Sofia Oliveira
Doutora Sibila Marques (Supervisão)
Doutor Ricardo Borges Rodrigues (Supervisão)

Para cada uma das afirmações seguintes escolha, por favor, a resposta que melhor exprime a sua opinião.

Responda de forma rápida e não fique a pensar muito tempo sobre a mesma afirmação. Desejamos a sua primeira impressão e não o resultado de um longo juízo sobre o assunto.

Note que apenas lhe é pedida a sua opinião honesta, pelo que não há respostas certas ou erradas.

No final, certifique-se, por favor, de que não deixou questões sem resposta.

Assinale as suas respostas com um X, por favor.

	Discordo por inteiro **-3**	Discordo bastante **-2**	Discordo um pouco **-1**	Concordo em parte **+1**	Concordo bastante **+2**	Concordo inteiramente **+3**
1. Os pais de crianças com deficiências e incapacidades devem ser menos austeros com os seus filhos do que os outros pais.	○	○	○	○	○	○
2. As pessoas com deficiências e incapacidades físicas são exactamente tão inteligentes como as pessoas sem deficiências e incapacidades.	○	○	○	○	○	○
3. É habitualmente mais fácil conviver com as pessoas com deficiências e incapacidades do que com as outras pessoas.	○	○	○	○	○	○
4. A maior parte das pessoas com deficiências e incapacidades sente pena de si própria.	○	○	○	○	○	○
5. As pessoas com deficiências e incapacidades são iguais a quaisquer outras pessoas.	○	○	○	○	○	○
6. Não deveria haver escolas especiais para crianças com deficiências e incapacidades.	○	○	○	○	○	○
7. Seria melhor para as pessoas com deficiências e incapacidades viverem e trabalharem em comunidades especiais.	○	○	○	○	○	○
8. É dever do Estado olhar pelas pessoas com deficiências e incapacidades.	○	○	○	○	○	○
9. A maior parte das pessoas com deficiências e incapacidades preocupa-se muito.	○	○	○	○	○	○
10. Não se deve esperar que as pessoas com deficiências e incapacidades atinjam os mesmos níveis de desempenho das outras pessoas.	○	○	○	○	○	○

	Discordo por inteiro **-3**	Discordo bastante **-2**	Discordo um pouco **-1**	Concordo em parte **+1**	Concordo bastante **+2**	Concordo inteiramente **+3**
11. As pessoas com deficiências e incapacidades são tão felizes quanto as outras pessoas.	○	○	○	○	○	○
12. Não é mais difícil conviver com as pessoas com deficiências e incapacidades graves do que com as que têm deficiências e incapacidades menos severas.	○	○	○	○	○	○
13. É quase impossível que uma pessoa com deficiências e incapacidades tenha uma vida normal.	○	○	○	○	○	○
14. Não se deve esperar demasiado das pessoas com deficiências e incapacidades.	○	○	○	○	○	○
15. As pessoas com deficiências e incapacidades têm tendência a isolar-se em si próprias a maior parte do tempo.	○	○	○	○	○	○
16. As pessoas com deficiências e incapacidades perturbam-se mais facilmente do que as outras pessoas.	○	○	○	○	○	○
17. As pessoas com deficiências e incapacidades não conseguem ter uma vida social normal.	○	○	○	○	○	○
18. A maior parte das pessoas com deficiências e incapacidades acha que não é tão capaz como as outras pessoas.	○	○	○	○	○	○
19. Tem de se ter cuidado com o que se diz quando se está na companhia de pessoas com deficiências e incapacidades.	○	○	○	○	○	○
20. As pessoas com deficiências e incapacidades estão frequentemente mal-humoradas.	○	○	○	○	○	○

Instrumento original por Yuker e Block (1960). Adaptado a partir da versão portuguesa de Martins e Pais Ribeiro (2007).

Dados Sociodemográficos

SD1 **Sexo**

Assinale a sua resposta com um X, por favor.

○ Masculino (1)

○ Feminino (2)

SD2 **Idade:** ________

SD3 **Nacionalidade(s):**____

SD4 **Estado Civil:**

Assinale a sua resposta com um X, por favor.

❍ Solteiro/a (1)	❍ Viúvo/a (4)
❍ Casado/a (2)	❍ Divorciado/a (5)
❍ União de facto (3)	❍ Separado/a (6)

SD5 **Nível de Escolaridade**

Indique-nos, por favor, o nível de escolaridade mais elevado que completou. Assinale a sua resposta com um X, por favor.

○ **Sem escolaridade.** (1)

1.º Ciclo do Ensino Básico	**2.º/3.º Ciclos do Ensino Básico**	**Ensino Secundário**	**Ensino Superior Pré Bolonha**	**Ensino Superior Bolonha**
○ 1.º Ano (2)	○ **5.º Ano**-2.º Ciclo (6)	○ 10.º Ano (11)	○ Licenciatura (14)	○ Licenciatura-1.ºCiclo (17)
○ 2.º Ano (3)	○ **6.º Ano**-2.º Ciclo (7)	○ 11.º Ano (12)	○ Mestrado (15)	○ Mestrado-2.º Ciclo (18)
○ 3.º Ano (4)	○ **7.º Ano-3.º Ciclo** (8)	○ 12.º Ano (13)	○ Doutoramento(16)	○ Doutoramento-3.ºCiclo (19)
○ 4.º Ano (5)	○ **8.º Ano-3.º Ciclo** (9)			
	○ **9.º Ano-3.ºCiclo** (10)			

○ Outro. ***Qual?*** (20) ____

SD6 **Profissão/ocupação actual:**____

SD7 **Há quanto tempo trabalha n**[redacted]**?**

_____ anos ______ meses

SD 7.1. **Em que** [redacted]**Serviço trabalha?**

____

SD 7.2. **Há quanto tempo trabalha no** [redacted]**Serviço em que desempenha funções actualmente?**

_____ anos ______ meses

SD 7.3. **Que funções desempenha actualmente?**

____

SD8 **Há quanto tempo trabalha com pessoas com deficiências e incapacidades?**

_____ anos ______ meses

SD9 **Tem algum tipo de formação específica na área das deficiências e incapacidades?**

Assinale a sua resposta com um X, por favor.

○ Sim. (1)

○ Não. (2)

SD10 **Se sim, pode especificar, por favor:**

Indique apenas um máximo de 3 que considere mais importantes relativamente à sua prática profissional. **Note que os exemplos não constituem uma lista exaustiva de todas as respostas possíveis.**

Tipo	Tema
EXEMPLOS	
Acção de Formação	*Comunicação Alternativa e Aumentativa*
Curso	*Língua Gestual Portuguesa – Nível A1*
Licenciatura	*Reabilitação e Inserção Social*
Mestrado	*Educação Especial - domínio cognitivo e motor*
Pós-Graduação	*Intervenção Precoce*
Respostas:	

SD11 **Tem alguma deficiência e incapacidade?**

Assinale a sua resposta com um X, por favor.

○ Sim. **Pode especificar resumidamente, por favor, a(s) sua(s) situação(ões) de deficiência(s) e incapacidade(s)?**(1)

____

____

○ Não. (2)

CDC1 **Tem algum colega de trabalho com deficiência(s) e incapacidade(s)?**

Assinale a sua resposta com um X, por favor.

○ Sim. (1)

○ Não. (2) ***Se não, passe, por favor, para a pergunta CDU1, na página 9.***

CDC2 **Com que frequência manteve contacto com algum/a dos/as seus/suas colegas de trabalho com deficiência(s) e incapacidade(s) durante o último ano?**

Assinale a sua resposta com um X, por favor.

Nunca. (1)	**Uma vez por ano. (2)**	**Algumas vezes por ano. (3)**	**Uma vez por mês. (4)**	**Algumas vezes por mês. (5)**	**Uma vez por semana. (6)**	**Algumas vezes por semana. (7)**	**Todos os dias. (8)**

ATENÇÃO: ***Se contactou com mais do que um/a de forma igualmente frequente, escolha apenas um/a deles/as para responder às 3 perguntas seguintes.***

CD3 **Pode especificar resumidamente, por favor, a(s) situação(ões) de deficiência(s) e incapacidade(s) do/a colega de trabalho com quem contactou mais frequentemente no último ano?**

____

____

____

CDC4 **Em que faixa etária se situa o/a colega de trabalho com deficiência(s) e incapacidade(s) com quem contactou mais frequentemente durante o último ano?**

Assinale a sua resposta com um X, por favor.

12 - 17 anos (1)	**18 - 30 anos (2)**	**31-40 anos (3)**	**41 - 50 anos (4)**	**51 - 60 anos (5)**	**61 - 70 anos (6)**

CDC5 **Como avalia a qualidade da relação que mantém com o/a colega de trabalho com deficiência(s) e incapacidade(s) com quem contactou mais frequentemente durante o último ano?**

Assinale a sua resposta com um X, por favor.

Muito negativa. 1	**2**	**3**	**4**	**5**	**6**	**Muito Positiva. 7**

CDU1 **No seu local de trabalho são prestados serviços a pessoas com deficiências e incapacidades.**

Com que frequência manteve contacto com algum/a, ou alguns/mas, desses/as utentes/clientes, durante o último ano?

Assinale a sua resposta com um X, por favor.

Nunca. (1)	**Uma vez por ano. (2)**	**Algumas vezes por ano. (3)**	**Uma vez por mês. (4)**	**Algumas vezes por mês. (5)**	**Uma vez por semana. (6)**	**Algumas vezes por semana. (7)**	**Todos os dias. (8)**

ATENÇÃO: ***Se contactou com mais do que um/a de forma igualmente frequente, escolha apenas um/a deles/as para responder às 3 perguntas seguintes.***

CDU2 **Pode especificar resumidamente, por favor, a(s) situação(ões) de deficiência(s) e incapacidade(s) do/a utente/cliente com quem contactou mais frequentemente no último ano?**

____

____

____

CDU3 **Em que faixa etária se situa esse/a utente/cliente com deficiência(s) e incapacidade(s) com quem contactou mais frequentemente durante o último ano?**

Assinale a sua resposta com um X, por favor.

0 - 2 anos (1)	**3 - 6 anos (2)**	**7 - 11 anos (3)**	**12 - 17 anos (4)**	**18 - 30 anos (5)**	**31-40 anos (6)**	**41 - 50 anos (7)**	**51 - 60 anos (8)**	**61 - 70 anos (9)**	**71 - 80 anos (10)**	**81 - 90 anos (11)**	**+ 90 anos (12)**

CDU4 **Como avalia a qualidade da relação que mantém com esse/a utente/cliente com deficiência(s) e incapacidade(s) com quem contactou mais frequentemente no último ano?**

Assinale a sua resposta com um X, por favor.

Muito negativa. 1	**2**	**3**	**4**	**5**	**6**	**Muito Positiva. 7**

CDA1 **Tem algum/a amigo/a (*<u>não familiar, e não colega de trabalho</u>*) com deficiência(s) e incapacidade(s)?**

Assinale a sua resposta com um X, por favor.

○ Sim. (1)

○ Não. (2) ***<u>Se não, passe por favor para a pergunta CDF1 na página 11.</u>***

CDA2 **Com que frequência manteve contacto com algum dos seus/suas amigos/as com deficiência(s) e incapacidade(s) durante o último ano?**

Assinale a sua resposta com um X, por favor.

Nunca. (1)	**Uma vez por ano. (2)**	**Algumas vezes por ano. (3)**	**Uma vez por mês. (4)**	**Algumas vezes por mês. (5)**	**Uma vez por semana.**	**Algumas vezes por semana.**	**Todos os dias. (8)**

<u>ATENÇÃO:</u> ***Se contactou com mais do que um/a de forma igualmente frequente, escolha apenas um/a deles/as para responder às 3 perguntas seguintes.***

CDA3 **Pode especificar resumidamente, por favor, a(s) situação(ões) de deficiência(s) e incapacidade(s) do/a amigo/a com quem contactou mais frequentemente no último ano?**

____

____

____

CDA4 **Em que faixa etária se situa o/a amigo/a com deficiência(s) e incapacidade(s) com quem contactou mais frequentemente durante o último ano?**

Assinale a sua resposta com um X, por favor.

0 - 2 anos (1)	**3 - 6 anos (2)**	**7 - 11 anos (3)**	**12 - 17 anos (4)**	**18 - 30 anos (5)**	**31-40 anos (6)**	**41 - 50 anos (7)**	**51 - 60 anos (8)**	**61 - 70 anos (9)**	**71 - 80 anos (10)**	**81 - 90 anos (11)**	**+ 90 anos (12)**

CDA5 **Como avalia a qualidade da relação que mantém com o/a amigo/a com deficiência(s) e incapacidade(s) com quem contactou mais frequentemente durante o último ano?**

Assinale a sua resposta com um X, por favor.

Muito negativa. 1	**2**	**3**	**4**	**5**	**6**	**Muito Positiva. 7**

CDF1 **Tem algum familiar (avós, pais, irmãos, filhos...) com deficiência(s) e incapacidade(s)?**

○ Sim. **Quem?** *Indique-nos apenas o(s) grau(s) de parentesco, por favor.* (1)

____

○ Não. (2) ***<u>Se não, passe, por favor, para a página 13.</u>***

CDF2 **Com que frequência manteve contacto com algum dos seus familiares com deficiência(s) e incapacidade(s) durante o último ano?**

Assinale a sua resposta com um X, por favor.

Nunca. (1)	**Uma vez por ano. (2)**	**Algumas vezes por ano. (3)**	**Uma vez por mês. (4)**	**Algumas vezes por mês. (5)**	**Uma vez por semana. (6)**	**Algumas vezes por semana. (7)**	**Todos os dias. (8)**

<u>ATENÇÃO:</u> ***Se contactou com mais do que um/a de forma igualmente frequente, escolha apenas um/a deles/as para responder às 4 perguntas seguintes.***

CDF3 **Com que familiar com deficiência(s) e incapacidade(s) manteve um contacto mais frequente durante o último ano?**

Indique-nos apenas o grau de parentesco, por favor.

____

CDF4 **Pode especificar resumidamente, por favor, a(s) situação(ões) de deficiência(s) e incapacidade(s) do/a familiar com quem contactou mais frequentemente no último ano?**

____

____

____

CDF5 **Em que faixa etária se situa o/a familiar com deficiência(s) e incapacidade(s) com quem contactou mais frequentemente durante o último ano?**

Assinale a sua resposta com um X, por favor.

0 - 2 anos (1)	**3 - 6 anos (2)**	**7 - 11 anos (3)**	**12 - 17 anos (4)**	**18 - 30 anos (5)**	**31-40 anos (6)**	**41 - 50 anos (7)**	**51 - 60 anos (8)**	**61 - 70 anos (9)**	**71 - 80 anos (10)**	**81 - 90 anos (11)**	**+ 90 anos (12)**

CDF6 **Como avalia a qualidade da relação que mantém com o/a familiar com deficiência(s) e incapacidade(s) com quem contactou mais frequentemente durante o último ano?**

Assinale a sua resposta com um X, por favor.

Muito negativa. 1	**2**	**3**	**4**	**5**	**6**	**Muito Positiva. 7**

Para cada uma das frases abaixo, escolha por favor a resposta que melhor exprime a sua situação.

Note que apenas lhe é pedida uma resposta honesta, pelo que não há respostas certas ou erradas.

No final, certifique-se, por favor, que não deixou questões sem resposta.

Assinale as suas respostas com um X, por favor.

	① **Nunca**	② **Uma ou duas vezes**	③ **Algumas vezes**	④ **Frequentemente**	⑤ **Muito Frequentemente**
1. Com que frequência conversa por longos períodos de tempo com uma pessoa com deficiência(s) e incapacidade(s)?	①	②	③	④	⑤
2. Com que frequência conversa por curtos períodos de tempo com pessoas com deficiências e incapacidades?	①	②	③	④	⑤
3. Com que frequência toma uma refeição com uma pessoa com deficiência(s) e incapacidade(s)?	①	②	③	④	⑤
4. Com que frequência contribui com dinheiro para organizações que ajudam pessoas com deficiências e incapacidades?	①	②	③	④	⑤
5. Com que frequência pessoas com deficiências e incapacidades discutem as suas vidas ou problemas consigo?	①	②	③	④	⑤
6. Com que frequência discute a sua vida ou problemas com uma pessoa com deficiência(s) e incapacidade(s)?	①	②	③	④	⑤
7. Com que frequência tenta ajudar pessoas com deficiências e incapacidades com os seus problemas?	①	②	③	④	⑤
8. Com que frequência é que pessoas com deficiências e incapacidades o/a tentam ajudar com os seus problemas?	①	②	③	④	⑤
9. Com que frequência trabalha com um/a cliente, aluno/a, ou paciente com deficiência(s) e incapacidade(s) no seu trabalho?	①	②	③	④	⑤
10. Com que frequência trabalha com um/a colega de trabalho com deficiência(s) e incapacidade(s)?	①	②	③	④	⑤

	① **Nunca**	② **Uma ou duas vezes**	③ **Algumas vezes**	④ **Frequentemente**	⑤ **Muito Frequentemente**
11. Com que frequência recebe visitas de um/a amigo/a com deficiência(s) e incapacidade(s) em sua casa?	①	②	③	④	⑤
12. Com que frequência visita amigos/as com deficiências e incapacidades nas suas casas?	①	②	③	④	⑤
13. Com que frequência se encontra com uma pessoa com deficiência(s) e incapacidade(s) de quem gosta?	①	②	③	④	⑤
14. Com que frequência se encontra com uma pessoa com deficiência(s) e incapacidade(s) de quem não gosta?	①	②	③	④	⑤
15. Com que frequência se encontra com uma pessoa com deficiência(s) e incapacidade(s) que admira?	①	②	③	④	⑤
16. Com que frequência se encontra com uma pessoa com deficiência(s) e incapacidade(s) de quem sente pena?	①	②	③	④	⑤
17. Com que frequência se sente aborrecido/a ou perturbado/a com o comportamento de uma pessoa com deficiência(s) e incapacidade(s)?	①	②	③	④	⑤
18. Com que frequência se sente agradado com o comportamento de uma pessoa com deficiência(s) e incapacidade(s)?	①	②	③	④	⑤
19. Com que frequência tem experiências agradáveis ao interagir com pessoas com deficiências e incapacidades?	①	②	③	④	⑤
20. Com que frequência tem experiências desagradáveis ao interagir com pessoas com deficiências e incapacidades?	①	②	③	④	⑤

Traduzido e adaptado a partir da versão original de Yuker e Hurley (1987).

CTRL **De acordo com a sua perspectiva, pode especificar, por favor, o que entende por "Pessoas com Deficiências e Incapacidades"?**

Terminou o preenchimento do questionário.

Muito obrigad@ pela sua participação.

Appendix AK

Post-Debriefing Informed Consent Form

ISCTE IUL
Escola de Ciências
Sociais e Humanas

1. Quais são os objectivos deste estudo?

Objectivo geral: Identificar os efeitos dos preditores psicossociais (contacto e motivação para não ser preconceituoso) nas atitudes explícitas e implícitas dos profissionais que trabalham com pessoas com deficiências e incapacidades em relação a este grupo;

Objectivos específicos: (1) Saber qual o impacto da qualidade e quantidade do contacto prévio com pessoas com deficiência e incapacidade nas atitudes implícitas e explícitas dos profissionais que trabalham com pessoas adultas com deficiência e incapacidade, em relação a esta população; e, (**2**) Explorar o efeito da motivação para não responder de forma preconceituosa nas atitudes implícitas e explícitas dos profissionais, que trabalham com pessoas adultas com deficiência e incapacidade, em relação a esta população.

2. Por que razões não são os objectivos explicitamente revelados antes da realização das tarefas propostas?

De modo a controlar os efeitos da desejabilidade social (que pode influenciar os resultados, independentemente do instrumento utilizado que permite, com mais ou menos facilidade, ter-se consciência do que está a ser medido e avaliado e com que objectivos), e a potenciar assim a fidedignidade dos resultados, o procedimento implica que os participantes desconheçam, à partida, a verdadeira natureza e objectivos do estudo, sendo então por isso que tais elementos não foram explicitados à partida.

O Código Deontológico da Ordem dos Psicólogos Portugueses (2011) obriga a que, nesta situação:

1) no fim da aplicação de todos os instrumentos, e individualmente se revele a informação ocultada, procurando-se então, subsequentemente, a obtenção do consentimento informado; oferece-se a possibilidade de recusa do participante em que os seus dados sejam utilizados; e,

2) se ofereçam esclarecimentos pós-investigação.

3. Quais os procedimentos realizados?

Em primeiro lugar foram recolhidos dados através de uma tarefa computorizada (medida de atitudes implícitas) e, em segundo, de um questionário (medidas de atitudes explícitas, contacto e motivação para agir de forma não preconceituosa e recolha de dados sociodemográficos para caracterização da amostra).

4. Quais são os possíveis benefícios, riscos e desconfortos associados à participação no estudo?

Não se antecipam quaisquer riscos com a sua participação, apenas o potencial desconforto associado ao tempo necessário para a aplicação do procedimento – cerca de 30 a 35 minutos no total.

Por outro lado, ao participar na presente investigação estará a dar um importante contributo para o aumento do conhecimento relativamente a alguns dos factores que podem, ou não, influenciar também a saúde e qualidade de vida de pessoas adultas com deficiências e incapacidades. Esta é uma área de investigação ainda pouco explorada quer internacionalmente, quer ao nível do nosso país.

5. Receberei algum pagamento ou outro tipo de contrapartida?

Não. A sua participação neste estudo é voluntária, não havendo qualquer remuneração ou contrapartida pela mesma.

6. Quem devo procurar em caso de dúvidas e esclarecimentos?

Poderá obter mais informações sobre este estudo contactando a Dr.ª Ana Sofia Oliveira através do e-mail ana_sofia_oliveira@iscte-iul.pt. Caso seja do seu interesse, poderá igualmente deixar o seu e-mail abaixo para receber posteriormente informações mais detalhadas sobre a investigação.

7. É garantida a confidencialidade?

Sim, a pesquisa é anónima. Todas as informações serão tratadas de forma a garantir e salvaguardar a confidencialidade. **Garantem-se o anonimato e confidencialidade dos dados recolhidos, inclusivamente no que se refere à instituição em que trabalha, uma vez que não serão reunidas informações que o/a permitam identificar;**

A publicação dos dados recolhidos durante a investigação só poderá ter lugar **em publicações académicas e científicas** (em que se inclui a dissertação de mestrado a que se refere o presente estudo), e **sob a forma de análise estatística**, **a qual incidirá sobre o conjunto de todos os dados**, e **não em respostas individuais.**

Appendix AK

Post-Debriefing Informed Consent Form

ISCTE IUL
Escola de Ciências
Sociais e Humanas

8. Tendo tido conhecimento dos objectivos do estudo após a realização das tarefas propostas, posso então recusar que os meus dados sejam utilizados?

Sim. De acordo com o Código Deontológico acima referido, os seus dados não podem ser utilizados, sendo os mesmos eliminados imediatamente.

9. Consentimento:

Confirmo que li o conteúdo deste Consentimento Informado e aceitei participar voluntariamente neste estudo, mesmo após me terem sido explicitadas as razões pelas quais os seus reais objectivos não me foram revelados antes da aplicação do procedimento adoptado.

Confirmo ainda que, após os esclarecimentos devidos, os objectivos da investigação ficaram claros para mim, assim como as razões pelas quais os mesmos não me foram revelados antes da aplicação das tarefas propostas. Compreendi também quais os desconfortos e riscos associados à participação nesta investigação, assim como as garantias de confidencialidade e de esclarecimentos. Ficou claro também que a minha participação é isenta de despesas.

O/A participante

____

E-mail: ____
(A preencher apenas no caso de pretender receber mais informações sobre o estudo.)

Data: _____/ _____/ 2014

10. Não consentimento:

Confirmo que li o conteúdo deste Consentimento Informado e que, após os esclarecimentos devidos, os objectivos da investigação ficaram claros para mim, assim como as razões pelas quais os mesmos não me foram revelados antes da aplicação das tarefas propostas. Compreendi também quais os desconfortos e riscos associados à participação nesta investigação, assim como as garantias de confidencialidade e de esclarecimentos. Ficou claro também que a minha participação é isenta de despesas.

*Contudo, não concordando com o procedimento adoptado nos termos acima explicitados, declaro então que **não autorizo** a utilização dos dados resultantes da minha participação, e **pretendo a sua eliminação imediata.***

O/A participante

____

E-mail: ____
(A preencher apenas no caso de pretender receber mais informações sobre o estudo.)

Data: _____/ _____/ 2014