



# Construct Validity in Workplace Bullying and Harassment Research

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**Abstract**

In this chapter, we scrutinize the construct validity of quantitative empirical research on workplace bullying and harassment during the last 5 years. We aim to respond to the question to what degree inferences can be legitimately made from the operationalizations in workplace bullying and harassment studies to the theoretical constructs on which those operationalizations were based. After carefully studying common definitions of workplace bullying and harassment, we found that scholars are largely in agreement (up to 90%) about two definitional issues: bullying is *repeated* and *systematic* negative social behaviour that endures *over a longer period of time*. In the light of these two definitional characteristics, we found that construct validity in this scholarly field is largely threatened in quantitative studies. Therefore, to improve the construct validity, we suggest some strategies. For researchers using behavioural inventories, we firstly recommend employing better-informed research designs and, in particular, sampling strategies. Researchers must sample enough targets or victims of bullying to be able to profoundly go into the discourse of bullying. Secondly, we advise these researchers to categorize their focal study variable to increase its construct validity. Researchers who use primarily the self-labelling approach are appealed to use definitions that operationalize, in a similar or equivalent way, the two fundamental features explained above that are shared by an overwhelming majority of bullying definitions. In addition, we invite researchers to use equivalent response sets. Finally, we call researchers to move away from a definitionalist view on construct validity by embracing a more relationalist view on workplace bullying and harassment, enabling them to investigate the issue of construct validity in relation to neighbouring or related concepts such as workplace incivility, counterproductive workplace behaviour, abusive supervision, workplace aggression and conflicts.

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**11.1 Introduction**

Workplace bullying and harassment research has grown exponentially over the last three decades and focuses primarily on target research. Serious attention on the topic is highly necessary given the severe and long-lasting consequences these phenomena have for their victims. Dealing with workplace bullying and harassment can easily become an ethical question. More specifically, its prevention can literally save people's lives, because ignoring its appearance may imply that its possible consequences, such as depression, anxiety and suicidal ideation, can become manifest. Therefore, one may argue that more in-depth and rigorous empirical research on workplace bullying and harassment is of utmost importance and urgency.

Unfortunately, the need to find substantive issues in this scholarly field may have come at the cost of underestimating methodological issues (Nielsen, Bjørkelo, Notelaers, & Einarsen, 2010b). Yet, the latter are essential because the particular way in which scholars investigate a certain research question and ditto hypotheses co-determines the quality of the response to the research question and, more importantly, the chances for acceptance or rejection of the research hypotheses. In turn,

empirical outcomes of a certain study bring forth other research for which follow-up, obviously, also relies on society's scarce resources. In other words, science is recognizing existing scholarship in a certain domain and, consequently, building upon each other's shoulders. But science is also a critical activity, and scepticism by important stakeholders in both academia and society is an important engine of science, just like surprise and imagination by all parties involved.

Undoubtedly, in both qualitative and quantitative research methods, the scientific body of knowledge is built on a (multilayered) foundation of assumptions. In case these assumptions are violated, empirical findings can be invalid. This makes scholars' jobs challenging because it is their task to adopt an appropriate toolset to investigate their specific research question and ditto hypotheses, in order to guarantee that their recommendations for both academic and societal parties are well grounded in high-quality scholarly work.

In this chapter, a critical stance is taken because we aim to investigate whether the empirical science we are building upon in the field of workplace bullying and harassment is actually valid. In particular, we investigate the construct validity of quantitative empirical research that was published between 2013 and 2017 because since 2013 the number of studies in the field has grown exponentially. In the next section, we will portray different definitions of workplace bullying and harassment in order to pinpoint their largest common denominator. Thereafter in Sect. 2, we will explain the notion of construct validity. Next, Sect. 3 gives an overview of empirical articles that are scrutinized with respect to the construct validity. After reporting the results of this investigation, some strategies to safeguard construct validity will be proposed in Sect. 4. Finally, in Sect. 5, we intend to help in further opening the black box of construct validity by calling for future research that should be aimed at drawing a nomological network to enable a more relationalist perspective on construct validity that is a view that constructs differ relatively rather than absolutely (Trochim, 2000).

In line with most of the definitions and scholarly descriptions of the process of workplace bullying (we will go into more detail on this aspect in the next section), this chapter deals primarily with workplace bullying from a target perspective. While the target perspective is the dominant perspective in workplace bullying research, other perspectives, such as that of the perpetrator and the bystander, may also provide valuable insight into the phenomenon (Baillien, Neyens, De Witte, & De Cuyper, 2009; Baumeister, Stillwell, & Wotman, 1990; Escartín, Sora, Rodríguez-Muñoz, & Rodríguez-Carballeira, 2012; Hauge, Skogstad, & Einarsen, 2009; Lutgen-Sandvik, 2003; Matthiesen & Einarsen, 2006; Rayner, Hoel, & Cooper, 2002; Zapf & Einarsen, 2003). However, quantitative empirical research on perpetrators and bystanders is still too limited to be scrutinized with respect to its construct validity.

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## 11.2 Defining Workplace Bullying and Harassment

Bullying is a specific type of aggressive behaviour (Aquino & Thau, 2009) that is probably as old as humanity itself (Brodsky, 1976; Olweus, 1978). Earlier studies show that, even among animals, a practice exists whereby "weaker" members are ostracized for the survival of the group as a whole. Ostracism, that is, ignoring and

excluding, among animals, is extensively documented (Williams, 2007). Therefore, it should not really come as a surprise that a similar phenomenon exists among people at work. People gossip about others, call each other names and tease, badger, humiliate and socially isolate other people.

In particular, bullying is about systematic and long-term exposure to unwanted behaviours that are primarily of a psychological nature. Many of these behaviours or acts may be relatively common in working life and may not be perceived as a real problem in themselves. However, when frequently and persistently directed towards somebody, they may become a serious source of stress (Zapf, 1999). It is likely that humans come into contact with bullying across the lifespan, be it as a perpetrator, a witness or a target. Pestering may occur already early in life, and from kindergarten to primary and secondary school up to university, bullying is part of social life (Björkqvist, Österman, & Hjelt-Bäck, 1994; Olweus, 1978). If bullying happens in the playground and in the classroom, it should not come as a surprise that we also find it on the shop floor and in the boardroom. It is distressing that indeed research on bullying in both schools (Olweus, 1978) and working life (Nielsen, Matthiesen, & Einarsen, 2010a) has revealed that bullying, while infrequent, is an omnipresent phenomenon. In Scandinavia, the phenomenon of bullying was first labelled “mobbing” (Heinemann, 1972; Olweus, 1973). Leymann (1986), however, employed the term “mobbing” to describe a phenomenon among adults that involves systematic exposure to subtle, less direct forms of aggression. According to Leymann, mobbing was to be conceived as contrasting “bullying”, a term used to describe more physical forms of aggression. Nowadays, different labels have emerged to describe psychological negative actions in the workplace: “harassment” (Brodsky, 1976), “abusive supervision” (Tepper, 2000), “incivility” (Blau & Andersson, 2005; Cortina, Magley, Williams, & Langhout, 2001), “emotional abuse” (Keashly, 1998) and “victimization” (Aquino, 2000). In Table 1, an extensive overview of labels and definitions is presented to illustrate that workplace bullying has been defined and also redefined over the past 30 years. The different labels and somewhat divergent descriptions may indicate that there is still quite some debate about the core issues or definitional elements of workplace bullying (Nielsen, 2009), for example: Must episodes of bullying occur *frequently* to label receiving negative acts as bullying? *How long* must one be exposed to negative acts before it may be labelled bullying? *Are power differences* of all sorts important to describe negative acts between parties as bullying? Does exposure to negative acts have to be *intended* for it to be labelled bullying? May negative behaviour in itself be labelled bullying or must (immediate) *harm* be done before it may be categorized as such?

A close inspection of Table 1 may help us to determine what scholars agree or do not agree about when defining workplace bullying and harassment. For instance, an overwhelming majority of scholars (80%) agree that bullying is about repeated negative acts: Most of the listed definitions mention the repetitive nature of bullying. A small majority of definitions underline the persistent and systematic nature of bullying. Yet 37.5% of the definitions explicitly mention prolonged time. In a similar vein, 40% of definitions mention that a target has difficulties defending himself or herself. A minority (16%) of definitions include the consequences of bullying as a

**Table 1** Labels and definitions of workplace bullying and harassment: investigation of the common elements in scholarly definitions

	Label	Definition
1	Harassment (Brodsky, 1976)	Repeated and persistent attempts by a person to torment, wear down, frustrate or get a reaction from another person; it is treatment which persistently provokes pressures, frightens, intimidates or otherwise causes discomfort in another person. Typically, a victim of bullying and harassment is teased and insulted and perceives that he or she has little resource to retaliation in kind
2	Bullying (Olweus, 1993)	<i>A person is bullied when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other persons, and he or she has difficulty defending himself or herself</i>
3	Scapegoating (Thylefors, 1987)	One or more persons who during a period of time are exposed to repeated, negative actions from one or more other individuals
4	Mobbing (Matthiesen, Raknes, & Røkkum, 1989)	One or more persons' repeated and enduring negative reactions and conducts targeted towards one or more persons of their work group
5	Health endangering leadership (Kile, 1990)	Continuous humiliating and harassing acts of a long duration conducted by a superior and expressed overtly or covertly
6	Mobbing/psychological terror (Leymann, 1990)	Hostile and unethical communication that is directed in a systematic way by one or more persons, mainly towards one targeted individual
7	Bullying (Adams, 1992)	Bullying is offensive behaviour through vindictive, cruel, malicious or humiliating attempts to undermine an individual or group of employees. Bullying is also persistently negative attacks on personal and professional performance, typically unpredictable, irrational and often unfair. This abuse of power or position can cause such chronic stress and anxiety that the employees gradually lose belief in themselves, suffering physical ill health and mental distress as a result
8	Harassment (Vartia, 1993)	Situations where a person is exposed repeatedly and over time to negative actions on the part of one or more persons
9	Harassment (Björkqvist, Österman, & Hjelt-Bäck, 1994)	Repeated activities, with the aim of bringing mental (but sometimes also physical) pain, and directed towards one or more individuals who, for one reason or another, are not able to defend themselves
10	Bullying (Einarsen, Raknes, & Matthiesen, 1994)	The term bullying refers to situations where an employee is persistently picked on or humiliated by leaders or fellow co-workers. A person is bullied or harassed when he or she feels

(continued)

**Table 1** (continued)

	Label	Definition
		repeatedly subjected to negative acts in the workplace, acts that the victim may find difficult to defend himself or herself against
11	Ostracism (Williams & Sommer, 1997)	The act of ignoring and excluding individuals and groups by other individuals and groups
12	Victimization (Aquino, 2000)	The individual's <i>self-perception</i> of having been exposed, either <i>momentarily or repeatedly</i> , to aggressive actions emanating from one or more other persons
13	Bullying (Hoel & Cooper, 2000)	A situation where one or several individuals persistently over a period of time perceive themselves to be on the receiving end of negative actions from one or several persons, in a situation where the target of bullying has difficulty in defending himself or herself against these actions. We will not refer to a one-off incident as bullying
14	Abusive supervision (Tepper, 2000)	The sustained display of hostile verbal and non-verbal behaviours, excluding physical contact
15	Bullying (Einarsen, 2000)	Bullying is defined as instances where an employee is repeatedly and over a period of time exposed to negative acts (i.e. constant abuse, offensive remarks or teasing, ridiculing, or social exclusion) from co-workers, supervisors or subordinates
16	Bullying (Zapf & Gross, 2001)	Bullying occurs if somebody is harassed, offended, socially excluded or has to carry out humiliating tasks and if the person concerned is in an inferior position
17	Bullying (Cowie, Naylor, Rivers, Smith, & Pereira, 2002)	Persistent exposure to negative acts at work, in the form of work related acts, personal acts or social isolation
18	Emotional abuse (Keashly & Jagatic, 2003)	Interactions between organizational members that are characterized by repeated hostile verbal and non-verbal, often non-physical behaviours, directed at a person such that the target's sense of himself or herself as a competent worker and person is negatively affected
19	Bullying (Einarsen, Hoel, Zapf, & Cooper, 2003, 2011)	Bullying at work means harassing, offending, socially excluding someone or negatively affecting someone's work tasks. In order for the label bullying (or mobbing) to be applied to a particular activity, interaction or process, it has to occur repeatedly and regularly (e.g. weekly) and over a certain period of time (e.g. 6 months). Bullying is an escalating process in the course of which the person confronted ends up in an inferior position and becomes the target of

(continued)

**Table 1** (continued)

	Label	Definition
		systematic negative social acts. A conflict cannot be called bullying if the incident is an isolated event or if two parties of approximately equal “strength” are in conflict
20	Workplace harassment (Varhama & Björkqvist, 2004)	Work harassment occurs when one or several individuals at the workplace are repeatedly exposed to insulting and infringing behaviour, which they, for one reason or another, cannot defend themselves against. Work harassment is, by its very nature, degrading
21	Workplace bullying, mobbing and emotional abuse (Lutgen-Sandvik, 2006)	Workplace bullying, mobbing and emotional abuse—essentially synonymous phenomena—are persistent, verbal and non-verbal aggression at work that include personal attacks, social ostracism and a multitude of other painful messages and hostile interactions
2	Workplace cyberbullying (Farley, Coyne, Axtell, & Sprigg, 2016)	A situation where, over time, an individual is repeatedly subjected to perceived negative acts conducted through technology (e.g. phone, email, websites and social media) which are related to their work context. In this situation, the target of workplace bullying has difficulty defending himself or herself against these actions
23	Cyberbullying (Gardner et al., 2016) borrowed from Piotrowski (2012)	Inappropriate, unwanted social exchange behaviours initiated by a perpetrator via online or wireless communication technology and devices
24	Cyberbullying (Farley, Coyne, Sprigg, Axtell, & Subramanian, 2015)	An aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend himself or herself

criterion. Only two definitions refer to imbalance in power and the intent of the perpetrator as defining elements. Finally, only a few definitions underline the difference with single event or a conflict.

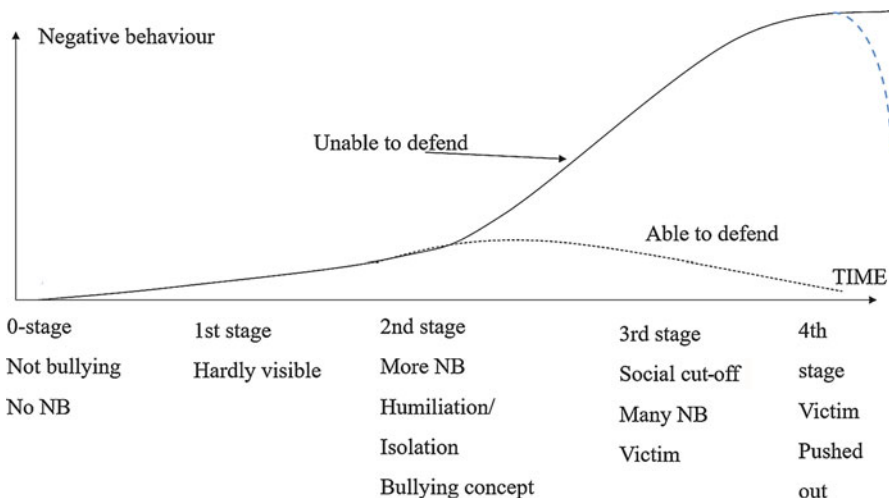
It seems reasonable to conclude that scholars largely agree that workplace bullying and harassment are about recurring persistent negative acts. It is also plausible to posit that, due to the repeated and prolonged nature of the behaviour, we deal with a phenomenon that unfolds over time. The recurring persistent nature of bullying implies a process where the target is or will become defenceless, and hence power differences will become apparent. In addition, it may also be argued that the recurring and prolonged nature of this negative social transaction will render people unable to resist and leave them powerless. Finally, their health and well-being will be seriously affected.

All in all, the definitions mentioned above allow the phenomena of workplace bullying and harassment to be conceived as repeated and persistent negative behaviour at work. As indicated here above, in our opinion, repeated and persistent

negative behaviour implies a process. More specifically, bullying is often described as an escalating process, frequently—but not always—triggered by a work-related conflict (Leymann, 1993; Zapf & Gross, 2001) in which the target becomes increasingly stigmatized and victimized and, therefore, unable to cope with the situation (see also Einarsen, 1999; Leymann, 1990). Matthiesen, Raknes and Røkkum (1989) argue that bullying must be seen as a continuum from “not at all exposed” to “highly exposed”. Other scholars do not explicitly refer to a continuum but describe different stages in a process.

For example, according to Björkqvist (1992), the first phase of the bullying process is characterized by the targets being subjected to aggressive behaviour that is difficult to pin down because of its indirect, discrete and subtle nature. Later on, more direct aggressive acts occur (Björkqvist, 1992). In this phase, the victims are clearly isolated and avoided and are humiliated in public by excessive criticism or by being made a laughing stock. In the end, both physical and psychological violence may be used. Leymann (1993, 1996), on the other hand, describes the stages of the bullying process from a more sociological–ethical perspective, pointing to the role and power of relevant actors in the organization. Building upon the work of Björkqvist (1992) and Leymann (1990), Einarsen (1999) identifies four stages: aggressive behaviour, bullying, stigmatization and severe trauma. In the first stage, the negative behaviour may be characterized as indirect aggression (Björkqvist, 1992), being subtle, devious and difficult to confront (Adams, 1992), and sometimes difficult to recognize, even by the targets (Leymann, 1996). This first phase, which may be very brief, tends to be followed by a second stage in which more direct negative behaviour occurs, which involves that the target is ridiculed, humiliated and socially isolated (Leymann, 1990, 1996). For Björkqvist (1992) and Leymann (1990, 1996), the concept of workplace bullying applies here, from this phase on, because open, direct and frequent negative behaviour is experienced (Björkqvist, 1992; Leymann, 1990, 1996). In the third phase, social isolation becomes more apparent, with victims being cut off from social support (Leymann, 1986). In this situation, it is easy for the target to become helpless and even unable to do anything resembling effective coping (Einarsen, Hoel, Zapf, & Cooper, 2003). In this stage, targets are also often confronted with the fact that they have no actual role in the workplace, having little or even no meaningful work to do. As a result, severe trauma develops. In the very end, Leymann (1993) refers to the last stage as expulsion, whereby targets are forced out of the workplace—often with at least the passive approval of the management—either through long-term sickness absence or dismissal or as a result of feeling brutally harassed out of the organization. To portray the phenomena of workplace bullying and harassment as a stage-like process, we have drawn Fig. 1. On the y-axis, the number of negative behaviours is depicted, while the x-axis represents time. Because there is a zero stage, where no negative behaviours occur, there are five instead of four stages. At the end of the process, that is, the expulsion stage, there are two directions the employee may head towards. The dotted line represents the employee leaving the workplace. Following this step, he or she experiences a steep drop in exposure. However, the exposure does not decrease for everybody. Some employees keep on being at work though in other organizations and may experience





**Fig. 1** Workplace bullying, a process: graphical representation

a continuation of the bullying process. That is to say, the bullying process is not necessarily a linear process. More specifically, drawing on conflict escalation research, on empirical research modelling catastrophe theory and on latent transition analyses suggesting the presence of critical events, it is expected that next to linear processes, other processes also exist (Escartin, Ceja, Navarro, & Zapf, 2013; Notelaers, Paas, & Einarsen, 2011a, 2012; Zapf & Gross, 2001). In the next section, we will go into the topic of measurement regarding workplace bullying and harassment and ideas on how to identify targets of these phenomena.

### 11.2.1 Measuring Workplace Bullying and Harassment and Identifying Targets

Two approaches are commonly used to measure exposure to workplace bullying through surveys: a self-labelling approach and a behavioural experience approach (Nielsen, Notelaers, & Einarsen, 2011). In the self-labelling approach, respondents are invited to indicate how often during the last 6 months they have been subjected to bullying, either after having been presented with a definition of bullying or not. Moreover, following this approach, targets are typically differentiated from non-targets by employing a cut-off criterion: experiencing workplace bullying at least weekly (Leymann, 1990) during the last 6 months. In the behavioural experience approach, respondents are invited to indicate how often they experienced each of a range of specific negative acts listed in a questionnaire, in general using a time frame of the last 6 months as well.

A clear advantage of the self-labelling method is that it does not take much space in a questionnaire and that it is also easy to administer (Nielsen, 2009). Furthermore,

as the method explicitly asks respondents whether they are exposed to bullying, the face validity of the method is convincing. Despite these strengths, the self-labelling method is not without flaws and difficulties (Nielsen, Notelaers, & Einarsen, 2011) as it comprises a subjective approach in which personality, emotional and cognitive factors and misperceptions may figure as potential biases (Felblinger, 2008; Lewis, 2004; Lewis, Sheehan, & Davies, 2008; Salin, 2003a). Secondly, the self-labelling approach alone does not offer insight into the nature of the behaviours involved. Designing interventions targeting the “potential” different stages of bullying (see victims’ reports in Adams, 1992; Baillien, Neyens, De Witte, & De Cuyper, 2009; Brodsky, 1976; Leymann, 1993; Liefoghe & Davey, 2003) may be a valuable approach in order to more explicitly investigate the nature of the behaviours involved.

In the tradition of the behavioural experience method, in which a list of typical negative social acts is presented to the respondent without explicitly mentioning the concept of workplace bullying, very many inventories have been developed to measure and assess the behaviours involved (see Escartín et al., ► [Chap. 10, “Workplace Bullying and Cyberbullying Scales: An Overview”](#), this volume, Section 2). Using multiple-item measurement instruments, such as the Negative Acts Questionnaire-Revised (NAQ-R) (Einarsen, Hoel, & Notelaers, 2009), has the advantage that their psychometric quality can be assessed. In addition, using multiple items from somewhat different yet overlapping domains (e.g. work-related, person-oriented and social isolation; Einarsen & Raknes, 1997) enables the measurement of different forms of bullying in the work environment. Moreover, when a response scale is offered to the participants in order to enable them to express how often they have experienced different negative acts, the frequency, and thereby the repeated nature of the experience(s), can be statistically modelled. As a result, more insight may be obtained into the different forms of bullying and their progress over time for different categories of respondents, when using appropriate statistical techniques (Galanaki & Papalexandris, 2013; Leon-Perez, Notelaers, Arenas, Munduate, & Medina, 2014; Magee, Gordon, Robinson, Caputi, & Oades, 2017; Notelaers, De Witte, Vermunt, & Einarsen, 2006a; Notelaers & Einarsen, 2013; Notelaers, Einarsen, De Witte, & Vermunt, 2006b; Notelaers, Van der Heijden, Hoel, & Einarsen, 2018b; Notelaers, Vermunt, Baillien, Einarsen, & De Witte, 2011b).

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## 11.3 Validity

### 11.3.1 Construct Validity

A simple definition of construct validity is the degree to which a test measures what it claims, or purports, to be measuring (Cronbach & Meehl, 1955). In the so-called classical approach to test validity, construct validity is one of the three main types of validity evidence, next to content validity and criterion validity. The approach that we adopt in this chapter comprises the modern approach to construct validity

(Messick, 1988) which conceives construct validity as the overarching concern of validity research, subsuming all other types of validity evidence (Messick, 1988).

Construct validity implies the appropriateness of inferences made on the basis of observations or measurements and specifically deals with whether a test measures the intended construct. In other words, construct validity refers to the degree to which inferences can legitimately be made from the operationalizations in a particular study to the theoretical constructs on which those operationalizations were based (Trochim, 2000). Trochim (2000) states that just like external validity, construct validity is related to generalizing. However, whereas external validity involves generalizing from a sample that was used in a specific study to other people, construct validity involves generalizing from the measures that were used to study the concept. This means the following: If a researcher wants to test a particular theory on the antecedents of workplace bullying or harassment, do the collected data and measures allow the researcher to legitimately draw conclusions from the empirical outcomes?

Trochim (2000) helps us to better understand the issues at hand. He divides construct validity into two broad territories that he refers to as the “land of theory” and the “land of observation”. The land of theory comprises what happens inside a researcher’s mind and his or her attempt to explain or articulate a certain notion to others. It encompasses all the ideas, theories, hunches and hypotheses that a scientist has about the world. In the land of theory, a researcher will formulate his or her idea about, for example, an intervention to prevent workplace bullying and harassment. The researcher formulates a precise idea or construct of the antecedents of the phenomena under investigation that he or she is trying to affect (e.g. role conflict as an antecedent of workplace bullying and harassment).

The land of observation, on the other hand, consists of what the researchers actually see happening in the world around him or her. In the land of observation, the researcher will implement his or her intervention and will collect the data using certain measures. Therefore, the researcher creates or uses previously developed measures that he or she believes will get at what he or she wants to get at.

Construct validity is an assessment of how well one translates ideas or theories into measures. “Why is this important?”, Trochim (2000) continues. Well, if a researcher tells someone that redesigning a particular job in such a way that the seeds for role conflict have been taken out of it, the researcher is communicating at the level of concepts or constructs. He or she is not describing in operational detail the specific elements that will be adjusted within the job description. He or she, as a researcher, is talking in general terms, using certain constructs. If his or her recommendation is based on empirical research that has shown that job redesign lowers role conflict, and subsequently workplace bullying and harassment, he or she ought to be sure that the job redesign he or she is referring to is the same as what was implemented. In addition, the type of outcomes that are striven for should be the same as in the intervention study. Otherwise, the researcher would be mislabelling or misrepresenting the empirical work. In this sense, construct validity can be viewed as a “truth in labelling” kind of issue. This means the following: If a researcher wants to test a particular theory on the antecedents of workplace bullying or harassment, does

the collected data allow the researcher to legitimately draw conclusions about these phenomena? In this contribution, we adopt a “definitionalist” perspective which tries to assure construct validity by defining a certain construct so precisely that it can be operationalized in a straightforward manner (Trochim, 2000). According to the definitionalist view, the researcher has either operationalized the construct correctly or not. Hence, such a view boils down to an either/or type of thinking, which is the kind of thinking that the bullying and harassment field seems to adopt in the operational part of the definition. In order for the label bullying (or mobbing) to be applied to a particular activity, interaction or process, it has to occur repeatedly and regularly (e.g. weekly) and over a period of certain time (e.g. 6 months) (Einarsen, Hoel, Zapf, & Cooper, 2011). Also, other parts of the definition describe precisely what bullying should and should not be: bullying is an escalating process, in the course of which the person confronted ends up in *an inferior position* and becomes the target of systematic negative social acts (Einarsen, Hoel, Zapf, & Cooper, 2011). But the analysis of the definitions yielded that consensus between scholars is much lower for this element and other elements of the definition.

The “definitionalist” view is in contrast to the “relationalist” perspective on construct validity where such level of precision is not really common. In the relationalist view, things are not black and white. Here, concepts are more or less related to each other, and the meaning of constructs differs relatively, not absolutely (Trochim, 2000). A certain measure might be capturing a lot of the construct of workplace bullying, but it may not capture all of the construct. There may be another measure that is closer to the construct than the particular one used. Relationalism rejects the idea that scholars can rely on operational definitions as the basis for construct definition. It seems that in defining workplace bullying, this perspective is not really embraced by the founding fathers of the field because they assert that a *conflict cannot be* called bullying if the incident is an isolated event or if two parties of approximately *equal “strength”* are in conflict (Einarsen, Hoel, Zapf, & Cooper, 2011). Only the first part of their definition (partly) matches a relationalist perspective: bullying at work means harassing, offending, socially excluding someone or negatively affecting someone’s work tasks (Einarsen, Hoel, Zapf, & Cooper, 2011). Consequently, in this contribution, we adopt a definitionalist perspective when empirically assessing the construct validity of workplace bullying and harassment research which scholars agree upon is about repeated and systematic (persistent) exposure to negative social behaviours. In Sect. 5, we will reflect on the added value of the relationalist perspective.

### **11.3.2 Construct Validity in Workplace Bullying and Harassment Research: Outcomes of Empirical Studies**

Irrespective of the schism between a definitionalist view and a relationalist view as referred to in the previous subsection, from an empirical point of view, the main question is whether one can legitimately infer the theoretical construct from what one has measured. Thus, to what extent does empirical research manage to measure workplace bullying which, according to our overview in Table 1, can be defined as

being repeatedly and persistently the subject of negative social behaviours (during a certain period of time)?

To investigate this research question, we have made an inventory of the empirical research that has been conducted so far. In January 2018, we searched for “workplace bullying” research during the period “2013–2017” using the Institute for Scientific Information (ISI) Web of Science. This search resulted in 820 hits. Subsequently, a filter was used in order to only select empirical research articles. Because this chapter highlights quantitative research, we have chosen to limit the search to those articles that described a sample. Hence, we used “sample” as a selection criterion as well. This resulted in 520 hits which were consulted for further scrutiny. A great deal of empirical articles were omitted from further analysis because of different reasons. First, after the selection, a large amount of qualitative research articles were still present. Second, irrespective of the search criteria, the selection retained some theoretical articles as well. Third, the major reason for omitting articles was the absence of descriptive statistics. The selection process resulted in the overview of 105 studies presented in Table 2.

### **11.3.2.1 Examination of Construct Validity of Empirical Studies Using the Behavioural Experience Approach**

To discern construct validity, which refers to the question whether one can reasonably justify that the sample allows the researcher to draw conclusions about the correlates of workplace bullying, we chose to omit some studies from further numerical analysis as these either did not portray means and standard deviations (SDs) (i.e. 18 and 66) or reported means and SDs for the different subscales only but not for the total scale (i.e. 9, 21, 24, 39, 40, 52, 45 and 64). Comparing the outcomes of the subscales with the ones for the total scales is not admissible. Moreover, from the studies that were suitable for further evaluation, we decided to analyse neither the sample means and SDs for subsequent measurement points nor the presence of other samples. This resulted in Table 3 where the means and SDs are not repeated but where the scale score for 1SD, 2SD and 3SD is given. Note that in most studies, the response category “1” refers to “never”, response category “2” refers to “occasionally”, response category “3” refers to “monthly”, response category “4” refers to “weekly” and response category “5” refers to “daily”.

In order to assess construct validity, we have carefully examined the distributions across the included studies. Not mentioned in Table 3 is the observation that these studies predominantly used estimators that rely strongly on the assumption of univariate, bivariate or multivariate normality like the OLS (ordinary least squares) estimator in SPSS (Statistical Package for the Social Sciences) or the maximum likelihood (robust) estimators in structural equation modelling software such as Mplus and AMOS (Analysis of Moment Structures). Using the mean, the SD and the normal distribution that these studies relied on, it is possible to calculate what particular score on the response category matches with 64% of observations that are distributed around the mean of the sample (1SD), what particular response category matches with 95.44% of observations that are located around the mean of the sample (2SD) and what particular response category matches with 99.75% of observations

**Table 2** Overview of studies

	Sample	Subjects	Sample size	Time points	Label in table	Mean	SD	Source	Author
1	Germany	Newspaper readers	151	Diary	WB victims	N.A.	N.A.	Self-label Yes/no	(Baillien, Escartín, Gross, & Zapf, 2017)
2	South Africa	Employees	373	1	WB	1.74	.62	NAQ-R	(Coetzee & Oosthuizen, 2017)
3	Australia	Working population	1062	2	Bullying	T1 .07 T2 .08	.26 .28	QPS Nordic No/yes	(Dollard, Dormann, Tuckey, & Escartín, 2017)
4	Spain	Workers	S1: 1506 S2: 932	1	WB	S1: .26 S2: .16 .13 1.07	.67 .31 .33 .54	S1:EAPA-T-R S2:EAPA EAPA-T-R Self-label	(Escartín, Monzani, Leong, & Rodríguez- Carballeira, 2017)
5	USA*	Healthcare professionals	94	1	Bullying exposure	N.A.	N.A.	NAQ-R ROC3345	(Evans, 2017)
6	USA	Full-time employees	314	1	WB	1.64	0.63	NAQ-R	(Goodboy, Martin, Knight, & Long, 2017)
7	Denmark	Civil servants and hospital employees	5418	3	Bullying	N.A. 4%	N.A.	Single item	(Grynderup et al., 2017)
8	USA	MBA undergraduates	128	1	Bullying	1.35	.54	Modified NAQ-R	(Jacobson, Hood, & Jacobson, 2017)
9	Canada	Graduate nurses	342 205	2	WRB	1.87	.72	Modified NAQ-R	(Laschinger & Fida, 2014)
10	UK	Stratified sample of employees	1357	1	Bullying at work Bullying	1.25 1.54	.69 .92	Two self-label items	(Lewis, Megicks, & Jones, 2017)

11	South Korea	Nurses	40	1	Bullying	1.61	.44	NAQ-R	(Kang, Kim, & Yun, 2017)
12	Greece	Employees	275	1	Bullying	1.49	.43	NAQ-R	(Kakarika, González-Gómez, & Dimitriadis, 2017)
13	Australia*	Employees	561	1	Different clusters	5 clusters	N.A.	NAQ-R	(Magee, Gordon, Robinson, Caputi, & Oades, 2017)
14	Vietnam	Public servants	274	1	Bullying	2.13	.94	SNAQ	(Nguyen, Teo, Grovet, & Nguyen, 2017)
15	Norway	Public servants at ministries	2337	2-3	Bullying	N.A. T1: 5% T2: 4%	N.A.	QPS Nordic Self-label	(Nielsen, Birkeland, Hansen, Knardahl, & Heir, 2017a)
16	Norway	Registry data	16,651	1	WB	N.A.	N.A.	QPS Nordic Self-label	(Nielsen, Emberland, & Knardahl, 2017b)
17	Norway	Employees	739	1	Exposure to bullying behaviours	1.39	.42	SNAQ	(Nielsen, Gjerstad, Jacobsen, & Einarsen, 2017c)
18	Portugal	Healthcare professionals	707	1		N.R. 8%	N.R.	NAQ-R Self-label	(Norton et al., 2017)
19	USA	Staff nurses	156	1	WB behaviour	1.05	N.R.	NAQ-R	(Olender, 2017)
20	Norway	Nurses	2946	1	Bullying	1.21	.34	12-item NAQ	(Olsen, Bjaalid, & Mikkelsen, 2017)
21	South Korea	Employees	239	1	Work related Person related Physical	1.62 1.46 1.36	.50 .46 .46	NAQ-R	(Park & Ono, 2017)

(continued)

Table 2 (continued)

	Sample	Subjects	Sample size	Time points	Label in table	Mean	SD	Source	Author
22	Australia	Hotel employees	72	1	Bullying	1.66	.54	NAQ	(Philip et al., 2017)
23	Poland	Employees in a private company	190	2	Exposure to bullying	T1: 1.58 T2: 1.67	.55 .69	NAQ-R	(Podsiadly & Gamin-Wilk, 2017)
24	China	Nursing students	366	1	Second-order bullying experience	Work 1.17 Person 1.56 Phys 1.33	N.R.	SNAQ	(Ren & Kim, 2017)
25	Spain	Employees and partners	68 and partners	Dyad Diary	Daily WB	1.63	.96	SNAQ	(Rodríguez-Muñoz, Antino, & Sanz-Vergel, 2017)
26	USA*	Nurses	345	1	Unclear	ROC3345		NAQ-R	(Sauer & McCoy, 2017)
27	Italy	Administration in academia	141	2	Bullying	1.61	.76	HSE-SIT 2 items (1-5)	(Spagnoli, Balducci, & Fraccaroli, 2017)
28	USA	Random	508	1	Bullying	Latent variable: N.A.	.70	NAQ-R	(Tokarev, Phillips, Hughes, & Irwing 2017)
29	Switzerland	Nursing home-care workers	5311	1	WB	N.A.	N.A.	4-item NAQ	(Tong, Schwendimann, & Zúñiga, 2017)
30	Belgium	Employees	3105		Exposure to WB	1.48	.51	SNAQ	(Van den Brande et al., 2017)
31	South Korea	Nurses	298	1	Victim	N.A.	N.A.	NAQ-R	(An & Kang, 2016)



32	Belgium	Employees	2029	1	Target Perpetrator	1.52 1.32	.52 .33	SNAQ PSNAQ	(Baillien et al., 2016)
33	Turkey	Nurses	284	1	Exposure to bullying	N.A.	N.A.	33 items (Yildirim & Yildirim, 2007)	(Bardakçı & Günüşen, 2016)
34	Denmark	PRISME and WHB cohorts	7500	3	Now and then Daily Monthly	Baseline 6.1% 1.4%		Self-label	(Bonde et al., 2016)
35	Finland	Public servants	1072	?	Exposure to negative acts/ bullying at work	N.A.	N.A.	Self-label	(Clausen et al., 2016)
36	Denmark	WHB cohort	3363 1664	2	WB	N.A.	N.A.	Self-label trichotomy	(Conway, Clausen, Hansen, & Høgh, 2016)
37	Norway	Transport company	284	1	Exposure to bullying	1.42	.50	SNAQ	(Einarsen, Skogstad, Rørvik, Lande, & Nielsen, 2016)
38	UK	Convenience	262	1	Workplace cyberbullying Workplace cyberbullying self-label Traditional bullying	1.60 1.27 1.35	.49 .62 .50	WCM Self-label SNAQ	(Farley, Coyne, Axtell, & Spriggs, 2016)
39	Denmark	Employees	3363	1	Work related Person related	1.46 1.14	.4 .21	Modified NAQ-R	(Francioli et al., 2016)
40	Denmark	WHB cohort employees	3363	1	Work related Person related	1.46 1.23	.23 .21	NAQ-R	(Francioli et al., 2016)

(continued)

Table 2 (continued)

	Sample	Subjects	Sample size	Time points	Label in table	Mean	SD	Source	Author
41	New Zealand	Residents of New Zealand	826	2	T2 WB T2 workplace cyberbullying	1.36 1.10	.47 .25	NAQ-R Cyberbullying own set of items	(Gardner et al., 2016)
42	Italy	Employees	326	1	WB	1.29	.31	NAQ-R 17	(Giorgi et al., 2016)
43	Italy	Employees in SME	1393	1	WB	1.45	.43	NAQ-R	Giorgi et al., 2016
44	USA	Public school bus drivers	117	1	Bullying	1.34	.46	Own instrument	(Goodboy, Martin, & Brown, 2016)
45	Denmark	PRISME or WHB cohorts	4455 3278	4	WB	N.A.	N.A.	Self-label Nominal	(Hansen et al., 2016)
46	Belgium	Workers	2983	1	Bullying	1.52	.53	9 items (Quine, 2002)	(Janssens et al., 2016)
47	Australia	Workers	1000	1	Bullying	13%	N.A.	COPSOQ Self-label	(Milner, Page, Witt, & LaMontagne, 2016)
48	Italy	Employees	2026	1	Bullying	1.42	.42	NAQ-R (Giorgi, Arenas, & Leon-Perez, 2011)	(Mucci et al., 2015)
49	Denmark	Employees	3227	?	Bullying	N.A.	N.A.	NAQ-R	(Mundbjerg Eriksen, Høgh, & Hansen, 2016)
50	Denmark	S1: WHB S2: PRISME S3: MODENA Employees	S1T1:2640 S1T2:1688 S2T1:3777 S2T2:2594 S3T3:4341	3	Bullying	N.A.	N.A.	Self-label Different time	(Nabe-Nielsen et al., 2016)
51	Pakistan	Employees	262	1	WB	2.7	1.02	8-item NAQ	(Naseer, Raja, & Donia, 2016)

52	Norway	Workforce SSB	1939 1508 1281	3	T1 person rel T1 work rel T1 Phys Intim	1.15 1.37 1.11	.29 .41 .27	NAQ-R	(Nielsen, Einarsen, Notelaers, & Nielsen, 2016)
53	Denmark	WHB, PRISME, or MODENA cohort employees	S1T1:3363 S1T2:2273 S2T1:4489 S2T2:3224	2	Bullying	N.A.	N.A.	Self-label Different categorizations	(Clausen et al., 2016)
54	South Korea	Nurses	508	1	Person rel Work rel Intimidation	1.47 1.60 1.40	.57 .59 .50	NAQ-R	(Oh, Uhm, & Yoon, 2016)
55	South Korea	Nurses	255	1	WB	1.51	.91	NAQ-R	(Hyunjin, Choon, & Joo, 2016)
56	Norway	Nurses	T1: 2059 T2: 1582	2	Exposure to bullying behaviours	T1 1.19 T2 1.18	.27 .26	SNAQ	(Reknes et al., 2016)
57	Japan	Welfare facility personnel	746	2	Bullying	N.A.	N.A.	NAQ	(Taniguchi, Takaki, Hirokawa, Fujii, & Harano, 2016; Yokoyama et al., 2016)
58	Quebec	Nurses	T1: 699 T2: 508	2	WB	T1:1.46 T2: 1.52	.53 .50	NAQ-R	(Trépanier, Fernet, & Austin, 2016)
59	Taiwan	Caregivers	262	1	WB	1.43	.43	NAQ-R	(Yen-Chun, Liang-Ju, Chen-Chieh, & Wen-Long, 2016)
60	Spain	An elderly care centrum and an SME	211	1	NAQ	1.27	.33	NAQ-R	(Arenas et al., 2015b)
61	Italy Spain	SME	I: 1151 S: 705	1	WB	I: 1.47 S: 1.46	.45 .52	Adapted NAQ-R Adapted NAQ-R	(Arenas, et al., 2015a)

(continued)

Table 2 (continued)

	Sample	Subjects	Sample size	Time points	Label in table	Mean	SD	Source	Author
62	Canada	Hospital staff	103	1	WB acts	1.31	.41	(Hutchinson, 2012); 12 months	(Blackstock, Harlos, Macleod, & Hardy, 2015)
63	USA	Employees MTurk	165	2	WB	1.92	1.15	NAQ-R person related	(Burton, 2015)
64	Quebec	Adult students Half employed	288	1	Work related Person related Physical	1.91 1.68 1.45	.87 .85 .86	NAQ-R	(Dussault & Frenette, 2015)
65	Norway*	Workforce SSB	1613	2	Occasionally bullied Victim	N.A.	N.A.	NAQ-R trichotomy 3345	(Eimarsen & Nielsen, 2015)
66	UK	Trainee doctors	158	1	Cyberbullying	N.R. 46.2%	N.R. N.A.	19 acts (Coyne et al., 2014) Single-act criterion	(Farley, Coyne, Sprigg, Axtell, & Subramanian, 2015)
67	Italy*	Patients	1717	1	WB	N.A.	N.A.	Mobbing UNIPSCO Victims >2	(Fattori et al., 2015)
68	Spain	Employees	372	2	Mobbing	T1: 1.32 T2: 0.31	.39 .49	UNIPSCO	(Figueiredo-Ferraz, Gil-Monte, & Olivares-Faundez, 2015)
69	Italy	Employees	679	1	Workplace bullying	1.36	.36	17-item NAQ-R	(Giorgi, Leon-Perez, & Arenas, 2015)
70	Denmark	PRISME	4114	2	Bullying	N.A.	N.A.	Self-label	

71	Denmark	S1: WHB S2: PRISME	S1T1:2640 S1T2:1688 S2T1:3777 S2T2:2594	2	Not bullied Occasionally Frequently bullying	94.26% 4.99% 0.75%	N.A. N.A. N.A.	Self-label trichotomy	(Gullander et al., 2015)
72	Denmark	Employees	1650	2	Negative acts	T1 1.3 T2 1.3	.33 .31	NAQ-R	(Holten, Robert Hancock, Persson, Marie Hansen, & Høgh, 2016)
73	USA	Employees	N.R.	1	Victims	8%	N.A.	Self-label Yes/no	(Khubchandani & Price, 2015)
74	Canada	Hospital nurses	1205	1	NAQ-R	1.55	.71	NAQ-R	(Spence Laschinger & Nosko, 2015)
75	Spain	Employees	762	1	Bullying	1.51	.55	NAQ-R	(Leon-Perez, Medina, Arenas, & Munduate, 2015)
76	Germany	Junior hospital physicians	507	2	Being bullied			Self-label Yes/no (Kivimäki et al., 2003)	(Loerbroks et al., 2015)
77	Australia*	Employees	1454	1	N.R.	6 classes	N.A.	NAQ-R	(Magee et al., 2015)
78	Italy	Employees	2026	1	Bullying	1.42	.42	NAQ-R (adapted by Giorgi, Arenas, & Leon-Perez, 2011)	(Mucci et al., 2015)
79	Norway*	Employees	2537	3	Bullied	N.A.	N.A.	Self-label Nominal measure Latent transition modelling	(Nielsen, Nielsen, Notelaers, & Einarsen, 2015)

(continued)

Table 2 (continued)

	Sample	Subjects	Sample size	Time points	Label in table	Mean	SD	Source	Author
80	Norway	Employees	4328 4328	2	Workplace bullying	4.9% 4.9%	N.A.	Self-label Yes/no	(Nielsen & Knardahl, 2015)
81	Poland		107		Bullying target Bullying perpetrator	2.15 1.52	.63 .48	UBQ	(Pilch & Turska, 2015)
82	USA	Educators	355	1	WB	1.33	.55	WBC (Fox & Stallworth, 2005)	(Powell, Powell, & Petrosko, 2015)
83	Quebec	Nurses	508	2	WB	1.46 1.43	.52 .54	NAQ-R	(Trépanier, Fernet, & Austin, 2015)
84	Japan	Labour force	1546	1	Experience of workplace bullying	6%	N.A.	Self-label 30 days Yes/no	(Tsunno & Kawakami, 2015)
85	Japan		216	2	Exposed to bullying	14.8% 15.1%	N.A.	NAQ-R Single-act criterion	Tsunno, & Kawakami (2015)
86	Italy	Employees in retail company	553	1	Bullying	1.67	.69	SNAQ	(Vignoli, Guglielmi, Balducci, & Bonfiglioli, 2015)
87	Serbia	Employees	1710	1	NAQ-R total	1.54	.63	NAQ-R	(Vukelić, Čizmić, Petrović, Tenjović, & Giorgi, 2015)
88	Poland	Employees	502	1	Bullying	1.38	.52	NAQ	(Warszewska-Makuch, Bedyńska,

89	USA	Nurses	241	1	Work rel Person rel Physical bul	1.78 2.28 1.26	.87 .95 .58	NAQ-R	& Żolnierczyk-Zreda, 2015) (Wright & Khatri, 2015)
90	Belgium	Employees in two organizations	T1: 680 T2: 357	2	Target Perpetrator	T1: 1.35 T2: 1.36 T1: 1.32 T2: 1.30	.33 .36 .26 .27	SNAQ PSNAQ	(Baillien, Bollen, Euwema, & De Witte, 2014)
91	Norway	Offshore employees	737	2	Bullying (NAQ-R)	T1: 1.19 T2: 1.18	.28 .24	NAQ-R	(Glabæk, Matthiesen, Hetland, & Eimarsen, 2014)
92	Denmark	Employees working in organizations larger than 25	3382	2	Never Occasionally Frequently	91% 7.8% 1.2%	N.A.	Self-label trichotomy	(Hansen, Høgh, Garde, & Persson, 2014)
93	Canada	Nurses in acute care	336	1	Bullying	1.45	0.59	NAQ-R	(Laschinger & Fida, 2014)
94	Norway	Nurses	1582	2	Exposure to bullying behaviours	T1: 1.19 T2: 1.19	0.26 0.26	SNAQ	(Reknes et al., 2014)
95	Spain	Employees in disability centres	696 442	2	WB	18.97% 20.04%	N.A.	Mobbing UNIPSCO	(Carretero & Luciano, 2013)
96	Caribbean region	Employees	262	1	N.R.	2.42	1.32	NAQ-R	(Devonish, 2013)
97	Greece	Junior and middle managers	840	1	No bullying Occasional	N.A.	N.A.	NAQ 32	(Galanaki & Papalexandris, 2013)

(continued)

Table 2 (continued)

	Sample	Subjects	Sample size	Time points	Label in table	Mean	SD	Source	Author
98	Poland	Full time at least three times contact with supervisor, students at institution	S: 197 S2: 309	1	negative acts Bullying WB	S1: 1.18 S2: 1.65	0.72 0.65	NAQ-R Single-act criterion NAQ-R Single-act Single-act criterion	(Garnian-Wilk, 2013)
99	Japan	Union members	699	1	Bullying	1.33	.91	Single-item trichotomy	(Giorgi, Ando, Arenas, Shoss, & Leon-Perez, 2013)
100	Brazil	Nursing professionals	868	1	Bullying	1.94	.19	Task attack (Rayner, 2002)	(Azevedo et al., 2013)
101	Norway	Offshore workers		2	WB	1.19 1.18	.28 .24	NAQ-R	
102	Norway*	Employees SSB1	2539	1	Occasionally bullied Victims	From 1.5 From 2.25	N.A.	NAQ-R	(Notelaers & Einarsen, 2013)
103	Belgium*	Employees	9363	1	Probability of being a target of severe bullying	3.6%	N.A.	NAQ-R	(Notelaers, Baillien, De Witte, Einarsen, & Vermunt, 2013)



104	Quebec	Nurses	1179	1	WB	1.5	.55	NAQ-R	(Trépanier, Fernet, & Austin, 2013)
105	Spain	Healthcare professionals	1484	1	WB superior active WB superior passive WB co-worker personal WB co-worker passive WB co-worker work	1.02 1.14 1.47 1.25 1.17	.21 .50 .77 .65 .50	HABS	(Waschglar, Ruiz-Hernández, Llor-Esteban, & Jiménez-Barbero, 2013)

Legend: \* studies that used in combination with the behavioural experience method to measure bullying also used adequate categorization techniques  
 WRB, work-related bullying; WHB, a Danish sample name; MODENA, a Danish sample name; PRISME, a Danish sample name; UBQ, União Brasileira para a Qualidade; SME, small and medium-sized enterprises; MTurk, Amazon Mechanical Turk  
 Abbreviations for measures: NAQ-R, Negative Acts Questionnaire-Revised (Einarsen, Hoel, & Notelaers, 2009); SNAQ, Short Negative Acts Questionnaire (Notelaers et al., 2018b); PSNAQ, Perpetrator SNAQ (not validated); QPS Nordic, the General Nordic Questionnaire for psychological and social factors at work (Dalner et al., 2000), self-label with yes and no as response categories; EAPA, Escala de Abuso Psicológico Aplicado en el Lugar de Trabajo/EAPA-T-R; EAPA reduced version (Escartin, Monzani, Leong, & Rodríguez-Carballeira, 2017); HSE-SIT, 2 items (ranging from 1 to 5) of the Italian version of the Health and Safety Executive Stress Indicator Tool (Spagnoli, Balducci, & Fraccaroli, 2017); WCM, Workplace Cyberbullying Measure (Farley, Coyne, Axtell, & Sprigg, 2016); COPSOQ, Copenhagen Psychosocial Questionnaire (Nübling, Stößel, Hasselhorn, Michaelis, & Hofmann, 2006); WBC, Workplace Bullying Checklist (Fox & Stallworth, 2005); HABS, Hospital Aggressive Behaviour Scale (Waschglar, Ruiz-Hernández, Llor-Esteban, & Jiménez-Barbero, 2013); Other abbreviations: USA, United States; UK, United Kingdom; WB, workplace bullying; ROC3345, receiver operating characteristic with one cut-off at 33 and one cut-off at 45; N.A., not applicable; N.R., not retrievable; S1, S2, sample 1, 2; T1, T2, time 1, 2

**Table 3** Scale scores at 1SD, 2SD and 3SD from the mean from studies using the behavioural experience method

Sample	Effective sample size	Label in results table	1SD 68%	2SD 95.44%	3SD 99.75%	First author
Australia	72	Bullying	2.2	2.74	3.28	(Bohle et al., 2017)
South Africa	373	Workplace bullying	2.36	2.98	3.6	(Coetzee, & Oosthuizen, 2017)
Australia	1062	Bullying	1.33	1.59	1.85*	(Dollard, Dormann, Tuckey, & Escartín, 2017)
Norway	284	Exposure to bullying	1.92	2.42 <sup>+</sup>	2.92	(Einarsen, Skogstad, Rørvik, Lande, & Nielsen, 2016)
Spain	1506	Workplace bullying	1.93	2.6	3.27	(Escartín, Monzani, Leong, & Rodríguez-Carballeira, 2017)
UK	262	Traditional bullying	1.85	2.35 <sup>+</sup>	2.85	(Farley, Coyne, Axtell, & Sprigg, 2016)
USA	314	Workplace bullying	2.27	2.9	3.53	(Goodboy, Martin, Knight, & Long, 2017)
USA	128	Bullying	1.89	2.43 <sup>+</sup>	2.97	(Jacobson, Hood, & Jacobson, 2017)
Greece	275	Bullying	1.92	2.35 <sup>+</sup>	2.78	(Kakarika, González-Gómez, & Dimitriades, 2017)
South Korea	40	Bullying	2.05	2.49 <sup>+</sup>	2.93	(Kang, Kim, & Yun, 2017)
UK	1357	Bullying at work	1.94	2.63	3.32	(Lewis, Megicks, & Jones, 2017)
Vietnam	274	Bullying	3.07	4.01	4.95	(Nguyen, Teo, Grover, & Nguyen, 2017)
Norway	739	Exposure to bullying behaviours	1.81	2.23 <sup>+</sup>	2.65	(Nielsen, Gjerstad, Jacobsen, & Einarsen, 2017c)
Norway	2946	Bullying	1.55	1.89	2.23*	(Olsen, Bjaalid, & Mikkelsen, 2017)
Norway	2059	Exposure to bullying behaviours	1.46	1.73	2.00*	Reknes et al., 2016
Spain	68	Daily workplace bullying	2.59	3.55	4.51	(Rodríguez-Muñoz et al., 2017)

(continued)

**Table 3** (continued)

Sample	Effective sample size	Label in results table	1SD 68%	2SD 95.44%	3SD 99.75%	First author
Italy	141	Bullying	2.37	3.13	3.89	(Spagnoli, Balducci, & Fraccaroli, 2017)
Belgium	3105	Exposure to workplace bullying	1.99	2.5 <sup>+</sup>	3.01	(Van den Brande et al., 2017)
Belgium	2029	Target	2.04	2.56	3.08	(Baillien et al., 2016)
New Zealand	826	T2 workplace bullying	1.83	2.3 <sup>+</sup>	2.77	(Gardner et al., 2016)
Italy	1393	Workplace bullying	1.88	2.31 <sup>+</sup>	2.74	(Giorgi et al., 2016)
Italy	326	Workplace bullying	1.60	1.91	2.22*	(Giorgi, Perminiene, Montani, Fiz-Perez, Mucci, & Arcangeli, 2016)
USA	117	Bullying	1.80	2.26 <sup>+</sup>	2.72	(Goodboy, Martin, & Brown, 2016)
Belgium	2983	Bullying	2.05	2.58	3.11	(Janssens et al., 2016)
Italy	2026	Bullying	1.84	2.26 <sup>+</sup>	2.68	(Mucci et al., 2015)
Pakistan	262	Workplace bullying	3.72	4.74	5.76	(Naseer, Raja, & Donia, 2016)
Korea	255	Workplace bullying	2.42	3.33	4.24	(Oh, Uhm, & Yoon, 2016)
Taiwan	262	Working bullying	1.86	2.29 <sup>+</sup>	2.72	(Peng, Chen, Chang, & Zhuang, 2016)
Norway	2059	Exposure to bullying behaviours	1.46	1.73	2.00*	(Reknes et al., 2016)
Spain	705	Workplace bullying	1.98	2.5 <sup>+</sup>	3.02	(Arenas et al., 2015a)
Spain	211	NAQ	1.60	1.93	2.26*	(Arenas et al., 2015b)
Italy	1151	Workplace bullying	1.92	2.37 <sup>+</sup>	2.82	(Arenas et al., 2015a)
Canada	103	Workplace bullying acts	1.72	2.13 <sup>+</sup>	2.54	(Blackstock, Harlos, Macleod, & Hardy, 2015)
Spain	372	Mobbing	1.71	2.1	2.49*	(Figueiredo-Ferraz, Gil-Monte, & Olivares-Faúndez, 2015)

(continued)

**Table 3** (continued)

Sample	Effective sample size	Label in results table	1SD 68%	2SD 95.44%	3SD 99.75%	First author
Italy	679	Workplace bullying	1.72	2.08	2.44*	(Giorgi, Leon-Perez, & Arenas, 2015)
Denmark	1650	Negative acts	1.63	1.96	2.29*	(Holten, Robert Hancock, Persson, Marie Hansen, & Høgh, 2016)
Canada	1205	NAQ-R	2.26	2.97	3.68	(Spence Laschinger, & Nosko, 2015)
Spain	762	Bullying	2.06	2.61	3.16	(Leon-Perez, 2015)
Italy	2026	Bullying	1.84	2.26 <sup>+</sup>	2.68	(Mucci et al., 2015)
Poland	107	Bullying target	2.78	3.41	4.04	(Pilch, & Turska, 2015)
USA	355	Workplace bullying	1.88	2.43 <sup>+</sup>	2.98	(Powell, Powell, & Petrosko, 2015)
Quebec	699	Workplace bullying	1.99	2.52	3.05	(Trépanier, Fernet, & Austin, 2015)
Quebec	508	Workplace bullying	1.98	2.5 <sup>+</sup>	3.02	(Trépanier, Fernet, & Austin, 2015)
Serbia	1710	NAQ-R total	2.17	2.8	3.43	(Vukelić, Čizmić, Petrović, Tenjović, & Giorgi, 2015)
Poland	502	Bullying	1.90	2.42 <sup>+</sup>	2.94	(Warszewska-Makuch, Bedyńska, & Żolnierczyk-Zreda, 2015)
Belgium	680	Target	1.68	2.01	2.34*	(Baillien, Bollen, Euwema, & De Witte, 2014)
Italy	1113	Bullying	1.92	2.37 <sup>+</sup>	2.82	(Arcangeli, Giorgi, Ferrero, Mucci, & Cupelli, 2014)
Norway	737	Bullying	1.47	1.75	2.03*	(Glambek, Matthiesen, Hetland, & Einarsen, 2014)
Canada	336	Bullying	2.04	2.63	3.22	(Lashinger, 2014)
Norway	1582	Exposure to bullying behaviours	1.45	1.71	1.97*	(Reknes, Einarsen, Knardahl, & Lau, 2014)
Italy	553	Bullying	2.36	3.05	3.74	(Vignoli, Guglielmi, Balducci, & Bonfiglioli, 2015)
Poland	309	Workplace bullying	1.90	2.62	3.34	(Gamian-Wilk, 2013)

(continued)

**Table 3** (continued)

Sample	Effective sample size	Label in results table	1SD 68%	2SD 95.44%	3SD 99.75%	First author
Japan	699	Bullying	2.24	3.15	4.06	(Giorgi, Ando, Arenas, Shoss, & Leon-Perez, 2013)
Brazil	868	Bullying	2.13	2.32 <sup>+</sup>	2.51	(Azevedo et al., 2013)
Norway		Workplace bullying	1.47	1.75	2.03*	
Quebec	1179	Workplace bullying	2.05	2.6	3.15	(Trépanier, Fernet, & Austin, 2013)

Legend: <sup>+</sup>, less than 4.56% of the respondents report to more frequently than between occasionally and monthly exposed to negative social behaviours; \*, less than 0.25% of the respondents report to more frequently than between occasionally and monthly exposed to negative social behaviours

that are situated around the mean of the sample (3SD). The subtraction “100% – 95.44%” gives the percentage of respondents that exceeded the particular score on the response scale denoted with +2SD. The number that matches +2SD in the first Italian sample (i.e. the study of Spagnoli, Balducci, & Fraccaroli, 2017) in Table 3 is 3.13. Given that the response anchors or categories were never (1), occasionally (2), monthly (3), weekly (4) and daily (5), the 3.13 in Table 3 implies that 4.56% of the participants of that particular Italian sample responded that they are exposed on a monthly basis to workplace bullying, which is, beyond reasonable doubt, systematic exposure. Finally, taking that percentage from the sample size in the second column leads to the number of respondents who exceeded that particular response category. Applied to the same Italian sample, 4.56% from the 141 individuals means that 6 respondents reported experiencing negative behaviour at work at least on a monthly basis. Most probably, almost nobody reported, on average, the experience of negative behaviours at work on a weekly basis because less than 0.25% (cf. 100% – 99.75%) of the 141 respondents had a score of 3.89.

To evaluate whether samples tapped into the essence of the workplace bullying construct, that is to say, systematic repeated negative exposure to negative behaviour, we propose that at least 4.56% of the sample should have a response over 2.5, hence reporting the experience of negative acts between “occasionally” and “monthly”. If the response has not passed that threshold, the study is marked with a “+” (see Table 3). In these cases, the construct validity of the study is seriously threatened because the sample hardly comprises subjects who report systematic exposure to bullying at work. If the response category matching 95.44% of the sample was lower than 2, the study sample most probably did not include any subjects who were systematically exposed to negative social behaviours. In such a case, the construct validity of the research is very seriously threatened. These studies are marked with an “\*” in Table 3. Note that these numbers do not directly allow us to conclude whether a study has sufficient power to test the research hypothesis. From the 56 studies that have been analysed (see Table 3), approximately one out of three gets “+”. Here, the construct

validity was seriously threatened. Almost one out of five studies gets code “\*” because the construct validity was very seriously threatened. Approximately, one out of seven studies seems to have 32% of individuals who responded indicating that they experienced bullying at work more than occasionally and 4.6% of individuals who responded indicating that they experienced bullying at work on a monthly or more frequent basis. Note that in 59% of the unmarked or remaining studies, only 4.6% of the respondents did report having been exposed to negative social behaviour between occasionally and monthly (approx. 2.5), whereas less than 0.03% reported to have experienced negative acts a bit more often than monthly exposure. Based upon the descriptive statistics, there appears to be ambiguity about the construct validity of these studies. Yet, there are studies where the construct validity is not jeopardized. These handful of studies were marked in the second table in the column with the country the sample was drawn from.

In sum, based upon the current set of studies on workplace bullying that have been included in our analysis, one may argue that 55% of these have hardly or not at all sampled respondents who experienced systematic negative behaviours, whereas a quarter of the studies have done so. A straightforward question emerges from these calculations: If a researcher has a sample that hardly or not at all covers bullied respondents, can he or she still use the label bullying to describe the construct he or she has measured? Is it valid or justified to use the label “bullying” to refer to the issue that one has measured? From a normative–ethical point of view, it is clear that bullying should have a skewed distribution. The less victims, the better, and from that stance, the researcher may feel relieved to see that the organizations from where he or she collected data have hardly any bullied employees. But still, if there are no or hardly any respondents who report being repeatedly and systematically exposed to negative behaviours, then one cannot, according to the definition of workplace bullying, apply the label to the social activity that was measured, can one?

A closer look at the label that researchers used in the results section of their specific manuscript yields two tendencies. First, irrespective of the threat to construct validity, 80% of the studies with code “+” used the label bullying. Second, only half of the studies that were categorized as code “\*” used the label (workplace) bullying to describe what the average portrayed. The others used labels such as “exposure to negative acts”, “negative acts questionnaire”, “exposure to bullying behaviours” or “target”. Although most studies used the term bullying, their means and SDs suggest that one should be very careful with this label. The likelihood that bullying, which refers to systematic exposure to negative acts, was sampled was very small indeed. In particular, only a small fraction of these studies have sampled a large enough fraction of systematically exposed respondents.

Moreover, among the studies that potentially deal with a very serious threat to construct validity, by far, most originate from Scandinavia, including Norway and Denmark, but also two Italian samples seem to have serious challenges with respect to validly covering the concept of workplace bullying. The distribution of countries across studies that potentially deal with a serious threat to construct validity is far more dispersed, and, of course, one should take into account that most studies in this overview seem to originate from Norway and Italy. With respect to the type of sample and sample size, we could not discern very dominant patterns.

### 11.3.2.2 Examination of Construct Validity of Empirical Studies Using the Self-Labeling Approach

Approximately a quarter of the studies listed in Table 2 used a self-labelling approach, whereas three out of four studies used the behavioural approach. Irrespective of the recommendation of Nielsen and colleagues (2011) to use both approaches, only a very small fraction used both approaches. Of the 25% studies that used a self-labelling method, almost half of these originated from the Nordic countries, with Danish studies being responsible for 7 out of 10 of the studies doing so.

In the self-labelling approach, respondents are invited to indicate how often during the last 6 months they have been subjected to workplace bullying, usually after having been presented a definition of the phenomenon. This definition comprises three elements or parts: “is directed in a systematic way”, “takes place often (almost every day) over a long period of time (at least for 6 months)”, which “eliminates temporary conflicts” (Leymann, 1990, p. 20). In the self-labelling approach, targets are typically differentiated from non-targets by employing a cut-off criterion. Leymann (1990) advocated to label respondents that experience workplace bullying during the last 6 months, at least weekly, as victims.

Other influential scholars (Einarsen, Hoel, Zapf, & Cooper, 2011) have agreed with the threshold suggested by Leymann (1990).

However, a detailed inspection of the articles using the self-labelling approach shows quite some heterogeneity. Firstly, whereas 29% of those studies use all three constituting parts of the definition by Leymann (1990), 42% do not use all parts when presenting a definition to the respondents. In 13% of the cases, no definition was presented at all. In the remainder of the studies, scholars defined bullying themselves. Secondly, in the studies using the definition of bullying, two types of response sets were used, namely, dichotomous response set (e.g. yes/no) and polytomous response sets (e.g. “no”, “rarely”, “occasionally”, “about once a week” and “several times a week”). Among the studies using a polytomous response set, different response sets were used as well. For example, some studies incorporated five categories, “no”, “rarely”, “occasionally”, “about once a week” and “several times a week”, whereas other studies offered the following response set to the respondent: “no”, “occasionally”, “monthly”, “weekly” and “daily”. Thirdly, different criteria or cut-offs were used to identify or classify respondents as victims of bullying. In the studies that used the response scale “no”, “rarely”, “occasionally”, “about once a week” and “several times a week”, respondents were classified as bullied when they did not say “no”. In some occasions, however, respondents were classified as bullied when responding at least “occasionally”. In the studies where the response categories were “no”, “occasionally”, “monthly”, “weekly” and “daily”, other practices emerge when researchers determine the bullied group. In some studies, the five response categories were dichotomized, thereby conceiving the respondents who responded “no” as not bullied and all the other respondents as bullied. In some cases, the five categories of responses were trichotomized. Next to the not bullied category, the occasionally bullied category comprising “occasionally” and “monthly” and a frequently bullied category of “weekly” and “daily” were

created. For the sake of completeness, in some other studies, all response categories were used, thereby defining the not being bullied category as the reference group. Fourthly, not all studies include all of the three elements mentioned here when defining bullying. Many studies left out the element (see Einarsen, Hoel, Zapf, & Cooper, 2003, 2011; Leymann, 1990) that a conflict is not bullying.

All in all, the fact that, next to definitions, response sets and thresholds to distinguish bullying from not bullying also differ from one another implies that the bullied group has a different meaning across studies, which jeopardizes construct validity. Taking the thresholds in the definition of bullying into account allows us to question the validity of the cut-off scores in two of these types of studies. Is “rarely” or “occasionally” frequent enough to be pinpointed down as bullying according to the definition of the construct? Does “rarely” or “occasionally” express the persistent and systematic nature of the workplace bullying concept? Unfortunately, more empirical data to address this question are absent.

What is also interesting is the specific label that is adopted in the distinguished studies using the self-labelling approach (see Table 2). Because most researchers operationalize persistent or systematic exposure by asking the respondent to think about what happened in the last 6 months (or even longer), one may have expected that studies that categorize respondents using the self-labelling approach would label the exposed group as “targets” or “victims of bullying” or “bullied”. Notably, these studies hardly used the label victim but rather used the label workplace bullying, the label that is very often used by researchers using the behavioural experience approach to measure workplace bullying.

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## 11.4 Strategies to Increase Construct Validity in Workplace Bullying and Harassment Research

There are some strategies to improve construct validity in this field. Because the challenges of the behavioural experience method and the self-labelling approach are quite different, we will treat them separately. We will first devote our attention to the behavioural experience method, and we will next turn to a discussion of the self-labelling approach.

### 11.4.1 Behavioural Experience Method

Table 3 indicates which of the samples employing the behavioural experience approach that were given the code “\*” use labels other than workplace bullying. Although relabelling the variable may seem a fair strategy, it does not tackle the issue of threatened construct validity. After all, labels such as “exposure to negative acts”, “negative acts questionnaire” and “exposure to bullying behaviours” are undefined from a theoretical stance. Otherwise stated, they refer to unknown constructs. This unknown territory is an atheoretical land where it is impossible to formulate research hypotheses, and under these circumstances, labels refer to a phenomenon that is



neither described nor defined. Obviously, theory is needed in order to be able to assess the meaning of the presented findings. Therefore, the label “target” that is mentioned among these studies using the behavioural experience approach seems to be inadmissible. What strategies do scholars have to increase construct validity when using the behavioural experience approach to measure workplace bullying?

#### 11.4.1.1 Sampling Strategies

Because the issue of construct validity in workplace bullying and harassment research goes hand in hand with sampling issues and, more precisely, with the lack of subjects who are systematically exposed to bullying, it seems that the first strategy is to give more serious attention to using an appropriate research design and, in particular, to one’s sampling strategy. The scrutinized studies (Table 3) have predominantly either relied on collecting data in a certain organization/in multiple organizations or have relied on a large representative sample. Whereas the heterogeneity in organizational samples is limited, it may be too large in representative studies. As a result, it is likely that the full range of the response scale has hardly been used (cf. restriction of range). Both organizational and representative samples may suffer from a potential bias meaning that victims who are expelled from the workplace in the form of dismissal, resignation or sick leave are often rendered out of reach (cf. the dotted line in Fig. 1). As a result, it is less likely that they will get a questionnaire—which also hampers the generalizability or external validity of the study. For instance, in the sample of Norwegian offshore workers engaged in oil rig platforms, a selection bias may have distorted sampling (Nielsen, Glasø, Matthiesen, Eid, & Einarsen, 2013). On oil rig platforms, ill health and psychological dysfunction lead to a ticket to shore—that is, home (Søyland, Matthiesen, & Notelaers, 2007)—in order to guarantee safety. Clearly, increasing efforts to also sample workers with ill health and psychological dysfunction and to effectively manage research endeavours so that absent or former employees also participate can make the crucial difference between a sample for which construct validity is threatened and a sample for which this is not the case. It may also happen that with using organizational data, there are hardly any bullied employees. In this case, the estimate reflects the true score, that is, being bullied is very unlikely—also here, the Norwegian oil rig platform sample could serve as an example. In this case, there was not a latent class of respondents that matched with the victimization from bullying category according to the definition of bullying (Søyland, Matthiesen, & Notelaers, 2007), making the study population less suited for studying workplace bullying and harassment.

An alternative to sampling employees in one or more organizations or employees in a region or country may be surveying employees that one suspects are more likely to be bullied. National representative studies or large heterogeneous samples may help to know where to sample more respondents who are systematically targeted (Niedhammer, David, & Degioanni, 2006; Nielsen et al., 2009; Notelaers, Vermunt, Baillien, Einarsen, & De Witte, 2011b). These studies often use large samples which increases the likelihood of having “sufficient” victims in order to be able to estimate who is more at risk. The latter helps future researchers to sample from specific

occupational groups. Next to such studies, educated guesses about where to find employees who are likely to be bullied will also be helpful. These educated guesses are often inspired by specific knowledge about the work environment which is often documented in qualitative research (see Cowan and Toth, ► [Chap. 15, “Qualitative Research Methods in the Study of Workplace Bullying, Emotional Abuse and Harassment”](#), this volume, Section 2). Also, sampling in work environments where specific constellations of job features point to a fertile soil for bullying or harassment can be useful to obtain a sufficient number of suitable respondents (Baillien, Notelaers, & De Witte, 2008; Baillien, Notelaers, De Witte, & Matthiesen, 2011b; Hauge, Skogstad, & Einarsen, 2011; Neyens, Baillien, Notelaers, & De Witte, 2007; Notelaers, Baillien, De Witte, Einarsen, & Vermunt, 2013; Van den Brande, Baillien, De Witte, Vander Elst, & Godderis, 2016). For instance, in a discordant work environment (Salin, 2003b), bullying may prevail and hence researchers may do well to examine such contexts. Of course, when doing so, the researcher should take necessary measures to rule out disturbance factors and preferably include a control group. Often, the research budget is limited, while sampling costs may increase dramatically in order to obtain sufficient respondents who are systematically exposed. Therefore, scholars could try to sample in other countries as well. The overview in [Table 2](#) does not allow us to draw conclusions about countries where workplace bullying prevails because the methodology to identify bullying is divergent as are the types of samples across studies.

Finally, it is clear that adjusting sampling strategies goes along with a strong need for accurate information. Although most ISI journals do have reporting standards, not all researchers adhere to these standards. In this chapter, we could not select quite a number of studies because the authors did not adhere to the minimal statistics of journals reporting standards. For instance, the publication manual of the APA (American Psychological Association) requires from scholars that they report at least the means and SDs of the variables of the study. Using these statistics allowed us to discern, to some extent, the construct validity of the measures in our field during the last 5 years. In case the researchers did not provide these data, we could not calculate the 1SD, 2SD, etc. Because bullying is not a normally distributed variable in samples, this type of calculus is an approximation of the prevalence of workplace bullying and harassment. Therefore, we invite scholars to report more than the minimal reporting requirements journals demand. This would assist future researchers to sample in a more efficient way which helps the construct validity of research in our field. In particular, we propose that scholars publish the frequencies for all the negative acts they have measured. When this information is completed with the number of respondents and the mean together with the SD for each item, others can use this information for their own calculations before sampling. Yet, the latter requires some technical skills that may hamper some to take well-informed conclusions regarding sampling. Therefore, it would be wise to agree upon a reporting standard. We see here a role for previous popular cut-off criteria. Leymann (1990) proposed the single cut-off criterion or threshold that defined victims of bullying as those respondents that experienced at least one negative act at least weekly during the last 6 months. Mikkelsen and Einarsen (2002) proposed to elevate

the number of negative acts to two. Later Agervold (2007) proposed that a victim should have at least experienced weekly three or four negative acts of social behaviours during the last 6 months. These simple thresholds have received quite some critique. In particular, Leymann's (1990) criterion, which has been the most popular one, has strong shortcomings with respect to type I and type II errors. Indeed, Salin (2001) demonstrated already at the start of the new millennium that the threshold produced many false positives, being respondents who are, according to Leymann's (1990) criterion, falsely classified as victims of bullying in the early 1990s. When validating the latent class cluster (LCC) approach using the NAQ, Notelaers, Einarsen, De Witte and Vermunt (2006b) demonstrated that the criterion validity of the single cut-off criterion was rather weak. Recently, it was shown that in addition to the large false positive rate, the single cut-off criterion also struggles with a large false negative rate (Notelaers & Einarsen, 2013). Hence, in addition to classifying a large proportion of not bullied respondents as "victims of bullying", a substantial proportion of bullied respondents were classified as "not bullied". Therefore, we argue that simple cut-off criteria should preferably not be used to classify respondents on the basis of a questionnaire in the tradition of the behavioural experience method. However, they are simple to calculate and have informative value for researchers that are designing studies and drawing samples: they give an estimate of the proportion of possibly bullied respondents. That estimate may be inaccurate, but it is more informative than the minimal statistics, that is, the mean and the SD. And these criteria are easy to use when a researcher wants to have a rough estimate of the probability of having victims of bullying in a certain sample. Given the critique vis-à-vis the one-act criterion, it would be not wise to recommend its further use. The classification properties of the two-act criterion and of the three-/four-act criterion have not been investigated up until now. But using the outcomes of true negative rate information and true positive rate information that have been published earlier, the three-act criterion has a more balanced false negative/false positive rate than the single-act criterion (see Table 3 in Notelaers & Einarsen, 2013).

#### 11.4.1.2 Categorization of the Latent Variable

The definition of workplace bullying and its operational parts that we have briefly described above clearly invite researchers to make a distinction between bullying and other negative social behaviours, for instance, conflict. Different methods to categorize data do exist, and the application of existing methods may facilitate construct validity (e.g. see the studies marked with an "\*" in Table 2). One typology to classify these methods is from arbitrary to non-arbitrary. As just pointed out, in the early years of research in the field of workplace bullying and harassment, scholars have proposed arbitrary cut-off points. They decided, without substantiating their proposal with empirical research, that one (Leymann, 1990) or two (Mikkelsen & Einarsen, 2001) negative acts reported at least weekly during the last week constitute workplace bullying from a target perspective. Others used the average sum score and categorized those respondents who score monthly or more often in the bullied group. Again, others used +1SD or 2SD as a cut-off. Also, traditional cluster methods, wherein clusters are constructed of the means (centroids) and variance, may be used

to identify different groups. As indicated here above, the advantage of these cut-off points is that they are easy to implement, but their disadvantage is that the significance of the findings (type I and type II errors) of such research is dependent upon the arbitrary decision of the researcher to define the cut-off somewhere. If researchers use these methods, it is very important, from a validity point of view, that they argue vis-à-vis the definition of workplace bullying substantively before deciding on the cut-off point. In addition, we also advise that they document their sensitivity and specificity, that is to say, their true positive and negative rates.

In terms of the non-arbitrary methods which rely on statistical criteria to determine the optimal cut-off points, two methods are particularly useful for the domain of workplace bullying and harassment, as they do not rely too much on distributional assumptions such as normality. These are receiver operating characteristic (ROC) analysis and latent class (LC) analysis.

ROC analysis is a procedure used to assess the diagnostic properties of tests, namely, to assess the way measures generally discriminate between categories of subjects (Pintea & Moldovan, 2009). This procedure enables the researcher to determine the ability of a test to discriminate between two groups (cf. not bullied vs bullied) and to choose the optimal cut-off point on a scale. ROC analysis has been used to define cut-offs, for example, for the General Health Questionnaire (Goldberg, Oldehinkel, & Ormel, 1998), and to identify people who need treatment for preventing depression (Sörensen, 1987). ROC relies upon “a gold standard” for the construction of such cut-off values (Streiner & Cairney, 2007). In medical science, the gold standard is often objective in nature: having or not having a disease. In psychology, in general, and in organizational and occupational psychology, in particular, however, the standard is closer to tin or lead than to gold (Streiner & Cairney, 2007) because of the fact that the empirical evidence is less strong and the researcher himself or herself needs to decide what the gold standard is. Similarly, in workplace bullying and harassment research, often an objective standard is not available, as also in this scholarly field the empirical evidence is less strong.

Notelaers and Einarsen (2013) argued for a subjective gold standard to identify cut-offs for the NAQ-R as follows: Firstly, the definitional core of the workplace bullying concept rests on the subjective perception of the target that the experienced negative behaviour is hostile and humiliating and that it is directed at himself or herself (Aquino & Bradfield, 2000; Niedl, 1995; Quinney, 1972). Secondly, there is substantial agreement that targets of workplace bullying show severe psychiatric symptoms (Balducci, Alfano, & Fraccaroli, 2009; Leymann & Gustafsson, 1996; Nielsen, Nielsen, Notelaers, & Einarsen, 2015), often being in need of treatment (see also Schwickerath & Zapf, 2011). Therefore, Notelaers and Einarsen (2013) chose to use the psychiatric caseness—which refers to the diagnostic criterion that identified the need for psychiatric treatment to prevent depression—criterion of the Hopkins Checklist (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974), a checklist that assesses depression and anxiety, as well. Other scholars chose alternative gold standards, which partly explains why different samples have led to the use of different cut-off points (Conway et al., 2018). As a result, their ROC-based cut-off points are per definition different.

The different choices made by scholars while determining the gold standard are illustrative of the arbitrariness that slips into this technique when an “objective” external criterion is absent. Therefore, we call upon future research to report in greater detail the methodology that underlies the decision for a gold standard. Therefore, we propose that researchers make a two-way or even three-way table where they identify clearly the combinations that describe the condition (i.e. bullying) and the combinations that do not describe the condition. Researchers that deem that only a single criterion is needed to identify the cut-off(s) should argue extensively and take into consideration possible measurement issues and biases.

Notelaers and colleagues (2006a, 2018) proposed the use of LC analysis to account for the complex and dynamic nature of the workplace bullying phenomenon as measured by the behavioural experience method. This methodology has some interesting properties for research in the area of workplace bullying. LC analysis can deal with the fact that the variables measuring exposure to workplace bullying are highly skewed (cf. Table 3). Furthermore, in contrast to more classical cluster methods, like traditional (e.g. *K*-means) clustering, LC analysis can easily treat categorical response—and count variables. The latter is important because bullying and harassment research employs dichotomous, ordinal and sometimes count variables to unravel the frequency of reported behaviour. Next, LC analysis takes item properties such as item difficulty and discriminatory power into account, which is important because properties may differ. Item difficulty refers to the difficulty respondents face when having to respond correctly to different items. For instance, think about how difficult it might be to respond correctly to questions like “How often have you been yelled at?” and “How often rumours about you have been spread during the last months?” Item discriminatory power refers to the ability items have to distinguish between bullied and not bullied respondents. Compare, for instance, NAQ items such as your work effort being criticized and being excluded from social fellowship. This is particularly relevant for the behavioural experience approach where inventories of negative acts are used (see Escartín et al., ► [Chap. 10, “Workplace Bullying and Cyberbullying Scales: An Overview”](#), this volume, Section 2). At least, Notelaers and De Witte (2003) found that for the NAQ items which had divergent item difficulty and divergent item discriminatory power (Notelaers & De Witte, 2003), adopting an approach such as LC analysis was all the more relevant.

More specifically, LCC analysis (Hagenaars & McCutcheon, 2002; Magidson & Vermunt, 2004; McCutcheon, 1987) is a statistical method that assumes that respondents belong to mutually exclusive groups, which are categories of a not directly observable (latent) variable (e.g. being a target of bullying). These groups (the latent classes) differ in their responses to a set of observed variables (called indicators or items). Typically, an LCC analysis starts with the estimation of a one-class model (assuming that the population is homogeneous) and subsequently increases the number of classes to two (e.g. not bullied/bullied), three, four, etc., until a model is found that statistically fits the data (Notelaers, De Witte, Vermunt, & Einarsen, 2006a; Notelaers, Vermunt, Baillien, Einarsen, & De Witte, 2011b). Similar to traditional reflexive measurement models such as factor models, the discrete latent

variable in LCC analysis must adequately explain the initial relationship between the indicators. An important difference with traditional cluster methods (such as *K*-means clustering) is that LCC analysis is based on a statistical model that can be empirically tested (Magidson & Vermunt, 2002). In contrast to traditional cluster methods, LCC analysis produces test statistics that guide the evaluation of fit for different alternative cluster models such as the log-likelihood and information criteria. As a consequence, determining the number of latent classes is less arbitrary than when using traditional cluster methods. In the LCC approach, every subject is assigned to only one cluster, based upon the modal assignment rule that classifies a subject to the class with the highest classification probability (Magidson & Vermunt, 2004; Vermunt, 2004). These membership probabilities are calculated based on the estimated parameters of the measurement model. Notelaers and colleagues (2006b, 2009, 2013, 2018) have used this method to empirically test whether different target groups exist regarding workplace bullying, based on the responses to an inventory measuring exposure to different kinds of specific bullying behaviours. LCC analyses using a sample of Belgian employees having completed the NAQ revealed six clusters reflecting different combinations of bullying acts encountered and showed increasing levels of gravity (Notelaers, Einarsen, De Witte, & Vermunt, 2006b; Notelaers et al., 2011b). A first group of respondents, the “not bullied” cluster, reported no exposure to the negative behaviours. A second group reported a rather low exposure to mainly work-related negative behaviours (i.e. the “limited work criticism” cluster). A third group was subjected to a limited amount of both work- and person-related criticism (i.e. the “limited negative encounters” cluster). A fourth group was subjected to a range of negative behaviours, yet mainly “now and then” (i.e. the “sometimes bullied” cluster). A fifth group, the “targets of WRB” cluster, comprised respondents who reported frequent exposure to various work-related negative behaviours but less frequent exposure to personal degrading behaviours. The sixth and last group, being the “targets of severe bullying” cluster, was the only group showing a high probability to be subjected to any type of bullying behaviour, even on a weekly basis during the last 6 months. These are surely targets because they report recurring negative behaviours during the last months. Therefore, this group fits the workplace bullying definition best, that is, being a target of recurring and frequent negative behaviours during the last 6 months. Applying this methodology to a Norwegian representative sample that completed the NAQ-R, Nielsen and colleagues (2009) were also able to identify a cluster, be it a very small one (0.9%) that aligned with the definition of bullying. Also in an English sample where the NAQ-R was completed (Einarsen, Hoel, & Notelaers, 2009) and in a Spanish sample using the Spanish version of the NAQ, a “severe targets or victims of bullying” category was identified (Leon-Perez, Notelaers, Arenas, Munduate, & Medina, 2013). Also with the short version of the NAQ, the LCC approach successfully identified a target cluster that matches the definition of workplace bullying (Notelaers, Van der Heijden, Hoel, & Einarsen, 2018b). Finally, in a Lithuanian sample where the workplace harassment questionnaire (Björkqvist, Österman, & Hjelt-Bäck, 1994) was administered to the respondents, the LCC approach was successful (Astrauskaite, Notelaers, Medisauskaite, & Kern, 2015). All in all, these applications indicate that LCC as a statistical technique works well to identify, over



and above the victims of bullying, also other groups that differ from each other with respect to the frequency and severity of the reported negative social behaviours, making it a valuable tool to safeguard construct validity. Yet, LCC analysis is neither an easy nor a well-known procedure, but as is the case with ROC analysis, there is increasing evidence of its use contemporaneously (Magee et al., 2015; Reknes et al., 2017; Vranjes, Erreygers, Vandebosch, Baillien, & De Witte, 2018).

### 11.4.2 Self-Labeling Approach

Leaving aside the outlier prevalence rates of 20% and 40%, the average prevalence rate across self-labelling studies of 3% invites us to recommend researchers using this measurement approach be as careful as the researchers using the behavioural experience method when designing studies and sampling observations. No wonder that the average sample size of the studies is approximately 3000 observations.

It is of course a speculation, but perhaps the low prevalence rate may have led to a change in response categories and a change in thresholds to determine victimization from workplace bullying. Diverging thresholds do not contribute to the comparability of studies. That in some studies a respondent who is rarely subjected to bullying according to a definition is classified as victim whereas in other studies he or she is not does illustrate that what bullying is, or implies, changes across studies. This does not contribute to the validity of the construct in the definitionalist perspective of validity that the workplace bullying and harassment field adheres to. Another issue that also threatens the construct validity of research is the use of different definitions. Whereas some studies include, next to repetitive and systematic behaviour over a longer period of time, also that bullying is not a conflict, other studies do not. The presence or absence of conflict in definitions may influence what respondents perceive as bullying after having read the definition and their responses. Finally, we note occasionally the use of different time spans to define the prolonged characteristic of workplace bullying and harassment. Clearly, the prevalence rates will increase when the time span is longer.

To improve the construct validity in the field, we invite scholars to agree as to which response categories, which parts of the definition and which time span are most appropriate to describe bullying and to classify respondents as bullied (and bullying others). The latter is not an easy task because up to now, there is still insufficient research to guide such decisions. We therefore call for more evidence-based research to find out how long it actually takes to experience bullying, to test which features are necessary to define bullying and which are not, both from a target and a perpetrator perspective.

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## 11.5 Limitations and Future Research

This chapter's scope was focused on the investigation of workplace bullying and harassment. There are a number of negative interpersonal behaviours at work such as physical aggression, personal conflicts, counterproductive workplace behaviour,

abusive supervision, workplace incivility, social undermining and so on that we did not take into account. Counterproductive workplace behaviour is employee behaviour that can go beyond negative interpersonal acts to include behaviour that goes against the legitimate interests of an organization. It can harm organizations or people in organizations including employees and clients, customers or patients (Fox, Spector, & Miles, 2001; Sackett, Berry, Wiemann, & Laczko, 2006). Abusive supervision and workplace incivility, being negative interpersonal behaviours that emerged later on the academic platform than workplace bullying did, use an excessive amount of items of the NAQ-R (Herscovis, 2011), or similar items, to measure what seems to be more specific forms of workplace bullying. In particular, abusive supervision (Tepper, 2000) seems to overlap strongly with bullying items but focuses on targets with the supervisor as the sole perpetrator. Workplace incivility (Andersson & Pearson, 1999) which is oriented towards other organizational members, in turn, refers to low-intensity ambiguous intended deviant acts. This matches Björkqvist's (1992) description of the first stage of the bullying process where indirect behaviours prevail. These behaviours may be subtle, devious and immensely difficult to confront the perpetrator with (Adams, 1992) and sometimes even difficult to be recognized by the target of the behaviours (Leymann, 1996).

This chapter's primary focus was on the target perspective. Although the target perspective is dominant in both risk management research and workplace bullying, we must acknowledge that workplace bullying—like other forms of interpersonal behaviours—is often born in an interaction between at least two parties and in many cases even in the presence of bystanders (Branch, Ramsay, & Barker, 2009). Whether perpetrators and bystanders construe negative social workplace behaviours in a similar way as targets do is an interesting research question. It is not long ago that workplace bullying researchers reported moderate to high correlations between receiving and enacting negative social workplace behaviours (Baillien, De Cuyper, & De Witte, 2011a; De Cuyper, Baillien, & De Witte, 2009; Hauge, Skogstad, & Einarsen, 2009). Moreover, recent research findings have shown that targets and witnesses react differently towards negative social workplace behaviours (Nielsen & Einarsen, 2013; Salin & Notelaers, 2018). Such findings add to the need for exploring the relationships between the different forms of interpersonal behaviour and workplace bullying factors, beyond the target perspective. From a quantitative methods stance, this is difficult because deconstructing enacting and receiving interpersonal behaviours and bullying requires intensive longitudinal designs and dynamic modelling approaches that allow researchers to capture the different roles (not involved, witness, target, perpetrator; see also Vol. 2, Section 2) and the possible transitions between these roles over time. As long as these roles remain undefined, studying such roles and possible transitions between them will rather be atheoretical. Clearly, the absence of clarity on what “enactment” of negative acts means and the absence of clarity on what may define a perpetrator blur current findings and make it rather impossible to test theoretical assumptions (e.g. hypotheses) and hamper the formulation of effective prevention measures. For instance, if somebody that is occasionally facing negative social behaviour is changing his or her coping behaviour from passively receiving negative social behaviour to defending himself or



herself by criticizing and thereafter ostracizing the source, is that person suddenly a perpetrator or a victim-perpetrator?

Till now, workplace bullying researchers in particular have embraced a definitionist view, thereby emphasizing what makes workplace bullying different from other constructs in the realm of negative social behaviour at work. Of course, other research topics like aggression and conflicts have not helped bullying researchers to embrace the possible communalities. In particular, esteemed conflict researchers defined bullying as a severe conflict, thereby reducing it to a specific type of conflict (Van de Vliert, 2010). In a similar vein, highly respected aggression researchers warned against the proliferation of labels (including bullying) in aggression research (Hershcovis, 2011). These kinds of research practices hamper not only the development of theory but also that of effective control strategies against bullying. There is a strong need for more empirical work on the relationship between different types of negative social behaviours. Moreover, in order to conduct a thorough investigation of the extent to which constructs overlap or rather differ from one another, the phenomena of workplace bullying and harassment should adopt a rationalist perspective on construct validity. The need to further explore the relationships between more types of negative social behaviours at work, the need to go beyond the target perspective as well as the need to take the dynamic nature of negative interpersonal behaviours into account resonate with the need to (urgently) draw and investigate the nomological network of these different and adjacent behaviours (Aquino & Thau, 2009; Hershcovis & Reich, 2013; Notelaers, Van der Heijden, Guenter, Nielsen, & Einarsen, 2018a). Cronbach and Meehl (1955) argued that researchers must develop a nomological network for their construct. This network should include the theoretical framework for what they are trying to measure, an empirical framework for how they are going to measure it and a specification of the linkages among and between these two frameworks (Trochim, 2000).

Future research on workplace bullying and harassment should, indeed, embrace the so-called relationalist perspective on construct validity. Notelaers and colleagues (2018) found commonalities and discrepancies between conflicts, aggression and workplace bullying. In particular, these scholars tested the relationship between the constructs and the extent to which they elicit different responses. However, to establish construct validity and thus to ascertain that one is not using different labels for the same construct, there is more needed than only valid statistical methods and existing data. Baillien and colleagues' (2017) work that addressed the question whether workplace bullying differs from conflict goes beyond the research by Notelaers et al. (2018b) because the former explicitly tested for the different features of the definitions for bullying and conflict. However, while being valuable, testing construct validity also involves testing discriminant and convergent validity. Hence, typical features of other constructs in the realm of negative social behaviours should be included in such studies as well. But also, positive social behaviours and unrelated constructs need to be operationalized to test discriminant validity. Obviously, investigating construct validity may prove to be difficult, if not impossible, as long as one uses the same or very similar items to measure different constructs

(Herscovis & Reich, 2013). And, finally, such research needs to be longitudinal as many of the concepts, for instance, conflicts and bullying, may involve escalation and de-escalation over time. Because the question on how long it takes to be bullied is an empirical one, we cannot give advice with respect to wavelength. Future research is needed here, and I remember from a constructive talk with the late president of the European Association of Work and Organizational Psychology, Robert Roe, that he invited us to experiment with time.

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## 11.6 Conclusion

The aim of this chapter was to examine construct validity in quantitative empirical research in the field of workplace bullying and harassment. We have focused on the following question: To what degree can inferences be legitimately made from the operationalizations in workplace bullying and harassment studies, on the one hand, to the theoretical constructs on which those operationalizations were based, on the other hand? Therefore, we first investigated to what extent scholars agree about the specific construct. From the definition of workplace bullying and harassment, we identified a common denominator. Ninety percent of the scholars agree that bullying and harassment is about prolonged and repeated exposure to negative social behaviours (negative acts). Thereafter, we made an inventory of empirical research published between 2013 and 2017. The results were fascinating. In terms of the self-labelling approach, it was rather difficult to quantify and compare different studies as they used different definitions, employed different response sets and used different thresholds for bullying. Consequently, the construct validity of research in the field is rather ambiguous. As a strategy to safeguard a psychometrically sound measurement of workplace bullying, we invite researchers to use a definition that includes both the repeated and endured exposure to negative social behaviours. Furthermore, we call researchers to use equivalent response sets such as “no”, “rarely”, “occasionally”, “monthly”, “weekly” and “daily”. Finally, we advise researchers to refrain from cut-off points to identify bullying that are not in line with the common parts of the bullying definition, that is, repeated or sustained systematic negative social behaviours during a prolonged period of time. Taking into consideration that most researchers measure bullying “during the last 6 months”, “occasionally” would be a reasonable threshold because occasionally being subjected to what is defined does meet repeated and sustained systematic exposure.

In terms of the behavioural approach, approximately a bit more than half of the samples seem to contain no or hardly any respondents who report prolonged and repeated exposure to negative social behaviours. Hence, half of the research seems to lack construct validity: in other words, that research is in essence not able to legitimately infer to the theoretical construct they were investigating. In order to prevent this from happening, we proposed two strategies, which may be combined: first, alignment of the research design with sampling procedures and, second, categorization of the latent construct in a meaningful (but consistent) way. With respect to the latter, both the ROC and the LCC models are useful to differentiate

“not bullied” respondents from “victims of bullying” which aligns with the notion of construct validity. Yet both approaches differ with respect to the arbitrariness they depend on, with the LCC model being the least arbitrary statistical technique as regards the extent to which it enables scholars to identify or classify thresholds that align with the definition of workplace bullying. In closing, it is important to acknowledge the limitation impinging on our endeavour, namely, the selection criteria used in this chapter to decide the parameters of including empirical research in our analysis. Having said that, we believe that this chapter offers a good illustration of the challenges at hand. Importantly, we want to underscore that scholars of workplace bullying and harassment may perhaps consider going back to the drawing board and coming up with nomological network(s) for their future research endeavours.

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## 11.7 Cross-References

- ▶ [Cyberbullying at Work: Understanding the Influence of Technology](#)
- ▶ [Depersonalized Bullying: An Emergent Concern in the Contemporary Workplace](#)
- ▶ [Innovations in Qualitative Approaches for Studying Workplace Bullying, Emotional Abuse and Harassment](#)
- ▶ [Interdisciplinary and Mixed Methods Approaches to Study Workplace Bullying, Emotional Abuse and Harassment](#)
- ▶ [Mapping “Varieties of Workplace Bullying”: The Scope of the Field](#)
- ▶ [Qualitative Research Methods in the Study of Workplace Bullying, Emotional Abuse and Harassment](#)
- ▶ [Researcher Ethics, Solidarity and Accountability: The Promise of Understanding](#)
- ▶ [The \(Un\)Questionable Challenges of Sample Access, Recruitment and Retention in Contemporary Workplace Bullying Research](#)
- ▶ [The Presence of Workplace Bullying and Harassment Worldwide](#)
- ▶ [Theoretical Frameworks That Have Explained Workplace Bullying: Retracing Contributions Across the Decades](#)
- ▶ [Workplace Bullying and Cyberbullying Scales: An Overview](#)
- ▶ [Workplace Bullying and Harassment as Group Dynamic Processes: A Multilevel Approach](#)
- ▶ [Workplace Bullying and the Polemic of Subjectivity and Intent](#)

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## 11.8 Cross-References to Other Volumes

[Different Faces of the Perpetrator in Workplace Bullying](#), Vol. 2  
[Targets of Workplace Bullying and Mistreatment: Helpless Victims or Active Provocateurs?](#), Vol. 2  
[The Role and Impact of Leaders on Workplace Bullying, Emotional Abuse and Harassment](#), Vol. 2

The Role of Bystanders in Workplace Bullying: An Overview of Theories and Empirical Research, Vol. 2  
Ostracism in the Workplace, Vol. 4

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