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Understanding HIV disclosure: A review and application of the Disclosure Processes Model

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Abstract

HIV disclosure is a critical component of HIV/AIDS prevention and treatment efforts, yet the field lacks a comprehensive theoretical framework with which to study how HIV-positive individuals make decisions about disclosing their serostatus and how these decisions affect them. Recent theorizing in the context of the Disclosure Processes Model has suggested that the disclosure process consists of antecedent goals, the disclosure event itself, mediating processes and outcomes, and a feedback loop. In this paper, we apply this new theoretical framework to HIV disclosure in order to review the current state of the literature, identify gaps in existing research, and highlight the implications of the framework for future work in this area.

Keywords

HIV; AIDS; Disclosure; Disclosure Processes Model; Review; Stigma

Introduction

Disclosure of HIV status is one of the most complex psychosocial challenges facing individuals who live with HIV/AIDS; it has important implications for both individual and public health outcomes. For example, disclosure is an important first step in gaining HIV-specific social support (e.g., Hays, McKusick, Pollack, & Hilliard,1993; Zea, Reisen, Poppen, Bianchi, & Echeverry, 2005) and, under some circumstances, can help prevent seroconversion of HIV-negative individuals (for a review, see Simoni & Pantalone, 2005) and facilitate adherence to antiretroviral (ARV) medications (Spire et al., 2008). However, despite these potential positive outcomes, disclosure also carries important risks. When information is shared with unaccepting individuals, it renders people living with HIV/AIDS (hereafter referred to as PLWHA) vulnerable to stigmatizing reactions such as social ostracism, physical harm, and workplace discrimination (Ogden & Nyblade, 2005).

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Given the importance of HIV disclosure, it is imperative that researchers and practitioners understand when and why disclosure is likely to be beneficial for PLWHA. The purpose of this article is to review the current literature and assess the applicability of a new theoretical model of disclosure in the context of HIV/AIDS disclosure. This model—the Disclosure Processes Model (Chaudoir & Fisher, 2010)—is designed to answer two critical questions: *When* and *why* is disclosure beneficial? We first provide a general review of disclosure theory and briefly describe the Disclosure Processes Model (DPM). We then use this model as an organizing framework to review the HIV/AIDS disclosure literature, identify gaps in the literature, outline suggestions to remediate these limitations, and identify practical implications of the theoretical model. This review extends current knowledge by synthesizing factors that affect the full disclosure process—from decision-making to outcomes—a-cross a wide variety of disclosure contexts. Thus, while previous reviews have focused on the association between disclosure and a specific outcome (e.g., social support: Smith, Rossetto, & Peterson, 2008; sexual risk behavior: Simoni & Pantalone, 2005) or in one context (e.g., disclosure to children: Murphy, 2008), the current review synthesizes across domains.

HIV disclosure: previous theory

What factors affect whether HIV disclosure will yield beneficial outcomes, and why do these outcomes occur? To date, researchers have offered few theoretical frameworks with which to address these questions. Instead, most models have focused on identifying factors that affect disclosure *likelihood* rather than disclosure *outcomes* and have provided frameworks that are predominantly descriptive rather than prescriptive. For example, previous theorizing suggests that PLWHA are likely to disclose only as their illness advances (i.e., disease progression theory; for a review, see Serovich, 2001), or when they perceive more benefits than costs of disclosure (i.e., consequences theory of disclosure: Serovich, Lim, & Mason, 2008). Others have suggested that predetermined decision rules affect disclosure likelihood (Arnold, Rice, Flannery, & Rotheram-Borus, 2008) or that different factors predict disclosure to sexual partners (e.g., Bird & Voisin, 2010) and nonsexual relationships (e.g., relationship intimacy: Bairan et al., 2007).

What existing theory and reviews all have in common is that they focus on the disclosure behavior as the “endpoint” of interest. What these approaches overlook, however, are the *outcomes* or consequences of disclosure—the ways in which disclosure can be beneficial or detrimental to various domains of well-being. Because they overlook the outcomes of disclosure, they also provide no theorizing about the reasons why disclosure can affect various outcomes (i.e., mediating processes).

The Disclosure Processes Model

In an effort to fill these existing gaps, the Disclosure Processes Model (hereafter referred to as DPM or simply “the model”) provides a theoretical framework to understand *when* and *why* interpersonal, verbal self-disclosure is beneficial for individuals who live with concealable stigmatized identities such as HIV/AIDS (for a full description, see Chaudoir & Fisher, 2010). PLWHA face ongoing decisions regarding disclosure over the course of their

lifetime. Therefore, the processes depicted in the model (Fig. 1) represent the workings of just one event that is situated within a lifelong series of disclosure events.

The model posits that disclosure must be conceptualized and studied as a single process that necessarily involves decision-making and outcome processes. It highlights the impact of antecedent goals, the disclosure event itself, mediating processes and outcomes, and a feedback loop. The model posits that approach vs. avoidance goals underlie disclosure behavior and articulates how these goals can shape each successive stage of the disclosure process. Finally, it posits that the relation between disclosure and a wide range of outcomes is a multiply mediated process. Specifically, disclosure can affect individual, dyadic, and social contextual outcomes through three types of mediating processes: (1) alleviation of inhibition, (2) social support, and (3) changes in social information.

Antecedent goals

The model specifies that disclosure begins with a decision-making process in which antecedent goals affect disclosure likelihood and subsequent outcomes. Consistent with decades of behavioral research (for a review, see Elliot, 2008), the DPM posits that disclosure is regulated by two distinct goal, or motivational, systems that represent approach and avoidance motivations (Gable & Strachman, 2008; Gray, 1987; Higgins, 1998). Approach goals are focused on pursuing a rewarding or desired end state, while avoidance goals are focused on avoiding a punishing or undesired end state (for a review, see Higgins, 1998). In the context of disclosure, PLWHA with approach goals might focus on obtaining positive outcomes such as strengthening an important relationship or being honest, while PLWHA with avoidance goals might focus on avoiding negative outcomes such as social rejection and conflict.

Importantly, the DPM posits that whether PLWHA adopt approach or avoidance disclosure goals is important because it determines *when* disclosure will be beneficial. In brief, approach and avoidance goals are each associated with distinct psychological profiles. Whereas approach goals are associated with attention to positive stimuli, positive affect, and approach-focused coping strategies, avoidance goals are associated with attention to negative stimuli, negative affect, and avoidance-focused coping strategies. Consequently, individuals with approach goals are likely to experience more optimal outcomes of their goal-pursuit compared to individuals with avoidance goals (e.g., Carver, 2006). Thus, the DPM predicts that PLWHA with approach disclosure goals will be generally be more likely to benefit from disclosure compared to PLWHA with avoidance disclosure goals.

Disclosure event

Once people make the decision to disclose, they then describe information about their identity to the chosen confidant. We define a disclosure event as the verbal communication that occurs between a discloser and a confidant regarding the discloser's HIV-positive status. This verbal communication can be characterized in terms of the breadth, depth, duration, and emotional content of communication (Altman & Taylor, 1973; Reis & Shaver, 1988) and the reaction it garners from the confidant.

The model predicts that disclosure goals affect the content of the disclosure event and the confidant response. Specifically, PLWHA with approach disclosure goals should be more likely to use effective communication strategies that, in turn, also elicit positive confidant responses. In contrast, PLWHA with avoidance disclosure goals should be less likely to use effective communications that, in turn, also elicit negative or neutral confidant responses.

Mediating processes and disclosure outcomes

How does this disclosure event then impact long-term outcomes? The model specifies that disclosure can affect individual (e.g., psychological distress), dyadic (e.g., sexual risk behavior), and social contextual (e.g., HIV awareness) outcomes. Further, the model proposes that the effect of disclosure on these outcomes is mediated through three potential processes: (1) alleviation of inhibition, (2) social support, and (3) changes in social information. That is, disclosure can affect a variety of outcomes because it can alleviate the negative psychological and physiological consequences of suppression (e.g., Strachan, Bennett, Russo, & Roy-Byrne, 2007), garner social support from confidants (e.g., Kalichman, DiMarco, Austin, Luke, & Difonzo, 2003), and introduce new information about HIV status “in the open” where this information can shape perceptions and behavior in both the immediate and broader social context.

Feedback loop

Finally, the DPM also suggests that a single disclosure event can affect subsequent disclosure trajectories through a feedback loop. PLWHA who have positive disclosure events will become increasingly open about their HIV status whereas individuals who have negative disclosure events will become increasingly concealed.

Review of the HIV disclosure literature

The DPM is the first theoretical model to identify a set of constructs that describe the disclosure process from decision-making to outcomes and propose causal relationships among these constructs. Though previous models of disclosure have identified relevant disclosure constructs such as antecedent goals and outcomes (e.g., Greene, Derlega, & Mathews, 2006; Petronio, 2002), they do not specify causal relationships to explain why or how constructs are related. Thus, the DPM provides a series of testable hypotheses that explain when (i.e., moderators) and why (i.e., mediators) disclosure can be beneficial.

Several of the model’s hypotheses have received empirical support in the context of HIV disclosure. In a longitudinal study of HIV disclosure, we examined how approach and avoidance goals affect disclosure likelihood and disclosure positivity (i.e., degree of support from confidant; Chaudoir, 2009). Results demonstrated that PLWHA with avoidance disclosure goals were less likely to have disclosed their HIV status within the past 6 months, but more likely to have negative disclosure events if they did disclose. Further, individuals who had negative disclosure experiences at Time 1 were less likely to have disclosed again at a 6-month follow-up (i.e., Time 2). Thus, these results provide some preliminary support for the role of goals in shaping disclosure likelihood and the quality of disclosure events among PLWHA. Other research has demonstrated that disclosure goals are related to

disclosure likelihood (Garcia & Crocker, 2008) and outcomes (Chaudoir & Quinn, 2010) in research examining disclosure of other concealable stigmatized identities (e.g., sexual orientation, mental illness). Additionally, the DPM's assertion regarding multiple mediating processes has also received some empirical support among disclosure of sexual orientation (i.e., alleviation of inhibition and social support; Beals, Peplau, & Gable, 2009). Together, these findings provide initial support for many of the hypotheses derived from the DPM.

In the current article, we utilize the theoretical framework offered by the DPM to systematically review the existing HIV/AIDS disclosure research. This review serves three primary purposes. First, using the DPM framework as a theoretical backdrop, we provide a comprehensive review of the full HIV/AIDS disclosure process—from decision-making to outcomes. Second, this review will point to areas of HIV/AIDS literature that support or fail to support the predictions of the DPM. Third, this review will identify limitations in extant HIV/AIDS disclosure research, provide recommendations for how to address these gaps, and identify practical implications of the DPM and future research guided by it.

Method

We located relevant articles by searching PubMed, PsycInfo, and HIV-related listservs for all empirical papers examining HIV/AIDS disclosure published through November 2009. We relied on search terms including derivatives of the word stem "disclos-" (e.g., disclose, disclosure) and "HIV," "human immunodeficiency virus," "AIDS," or "Acquired Immune Deficiency Syndrome." To be eligible for inclusion, articles had to be written in English, provide a quantitative assessment of at least one main component of the DPM (i.e., antecedent factors, aspects of the disclosure event itself, or outcomes of disclosure) and assess interpersonal, verbal disclosure of HIV status by PLWHA.

Articles were reviewed in the two-step process depicted in Fig. 2. First, article titles and abstracts were reviewed for inclusion criteria. Second, the remaining articles were read by the first author and vetted further based on inclusion criteria. The search yielded 210 articles that were coded by the first author for country of origin, study design (e.g., cross-sectional vs. longitudinal), components of the DPM assessed, population, and types of confidants examined.

Results

Descriptives

Our search criteria yielded 210 articles (see Table 1 for descriptive characteristics). The majority (67%) of articles examined HIV/AIDS disclosure in the United States, while 14% examined disclosure in African countries and 8% examined disclosure in European countries. The vast majority (84%) of articles conducted a cross-sectional analysis of disclosure processes. Studies were most likely to examine disclosure among adult men and women generally (35%) and among men who have sex with men (MSM; 15%). Finally, studies were most likely to examine disclosure to multiple types of confidants (e.g., family, friends, sexual partners; 47%) or to sexual partners only (31%). Because we are interested in identifying support for the causal associations between main disclosure constructs, we give

greater attention to evidence from studies that adopt methodologies that allow for stronger causal inference (i.e., longitudinal designs). Thus, in each section of our results, we first present longitudinal evidence and then briefly discuss cross-sectional evidence.

Most (69%) studies assessed antecedent factors, very few studies (7%) assessed any aspect of the disclosure event itself, and a majority (56%) of studies assessed an outcome of disclosure (see Table 2). Five main antecedent factors were assessed across this literature: disclosure motivations, stigma, disease progression, confidant serostatus, and confidant relationship. Three aspects of the disclosure event were assessed across this literature: disclosure positivity (i.e., the extent to which the confidant responded in a positive and supportive manner), content of communication, and whether confidants were disclosed to directly or indirectly (i.e., from discloser vs. other people). Finally, nine types of outcomes were assessed across this literature: individual psychological well-being, social support, ARV adherence, and physical well-being; dyadic sexual risk behavior and confidant well-being; and social contextual knowledge of HIV, prejudice, and HIV preventative behaviors.

Antecedent factors

Studies we located examined five main types of antecedent factors: Disclosure goals, stigma, disease progression, confidant serostatus, and confidant relationship.

Disclosure goals

While research has not explicitly examined the effect of approach or avoidance disclosure goals *per se*, researchers have identified a number of goals, or motivations, that affect disclosure likelihood, including the desire to maintain a close relationship with the confidant, desire to educate the confidant, fear of rejection, and self-blame (e.g., Derlega & Winstead, 2001; Derlega, Winstead, & Folk-Barron, 2000; Derlega, Winstead, Greene, Serovich, & Elwood, 2004). All of this research has used cross-sectional methodology and most asked participants to retrospectively recall their goals or reasons for disclosure and have used this information to predict likelihood of disclosure to various types of confidants (e.g., Derlega, Winstead, Greene, Serovich, & Elwood, 2002; Derlega et al., 2004; Serovich et al., 2008; Zea, Reisen, Poppen, Bianchi, & Echeverry, 2007; for an exception, see Duru et al., 2006). Not surprisingly, the majority of studies found that goals for disclosure were related to greater likelihood of disclosure whereas greater goals against disclosure were related to lower likelihood of disclosure (Akani & Erhabor, 2006; Derlega et al., 2002, 2004; Serovich et al., 2008; Serovich & Mosack, 2003; Zea et al., 2007; for an exception, see Duru et al., 2006).

Stigma

Given that HIV/AIDS is a severely socially devalued attribute, stigma is one of the major barriers to disclosure. Longitudinal studies demonstrated that general perceptions of stigma were related to lower disclosure likelihood across time. For example, among women who tested positive for HIV during pregnancy in South Africa, baseline perceptions of stigma predicted lower likelihood of disclosure to sexual partners at a follow-up 3-months after birth (Makin et al., 2008). Similarly, a study of women living with HIV/AIDS in the U.S. also found that stigma predicted lower likelihood of disclosure to friends and family a year

later (Clark, Lindner, Armistead, & Austin, 2003). However, findings from cross-sectional studies have been mixed (e.g., Li, Wang, Williams, & He, 2009; Vanable, Carey, Blair, & Littlewood, 2006).

Disease progression

The evidence supporting disease progression theory is quite mixed. Although one longitudinal study demonstrated that illness stage is related to increased rates of disclosure over time (Lee & Rotheram-Borus, 2002), two longitudinal studies demonstrated no association between time since diagnosis and illness stage and disclosure (Hays et al., 1993; Landau & York, 2004). The evidence among cross-sectional studies also provided mixed results, with only slightly more than half (56%) of studies demonstrating that disease progression is related to greater disclosure (e.g., Deribe, Woldemichael, Wondafrash, Haile, & Amberbir, 2008; Rosser et al., 2008; Zea et al., 2007). Measurement heterogeneity is likely one factor contributing to these mixed findings. Studies that assessed disease progression as self-reported acceptance of HIV status or as CD4 count or viral load (Kirshenbaum & Nevid, 2002; Rosser et al., 2008) reported consistent, positive associations between disease progression and disclosure likelihood whereas those that assessed disease progression in terms of time since diagnosis (e.g., Wong et al., 2009; Zea et al., 2007) and disease staging (e.g., asymptomatic vs. symptomatic vs. AIDS; Deribe et al., 2008; O'Brien et al., 2003) reported mixed findings.

Confidant serostatus and confidant relationship

Almost all (14; 93%) articles that assessed confidant serostatus demonstrated that disclosure is greater to confidants for whom serostatus is known (vs. unknown; King et al., 2008; Loubiere et al., 2009; Semple, Zians, Grant, & Patterson, 2006), with rates of disclosure greatest to confidants who are also known to be HIV-positive (e.g., Bachmann et al., 2009; Niccolai, King, D'Entremont, & Pritchett, 2006; Rice, Comulada, Green, Arnold, & Rotheram-Borus, 2009).

The majority of studies that assessed the confidant relationship found that PLWHA are typically more likely to disclose to close family members and friends than extended family or coworkers (e.g., Peretti-Watel, Spire, Pierret, Lert, & Obadia, 2006). Among sexual partners, disclosure is more common among steady compared to casual sexual partners (e.g., Batterham, Rice, & Rotheram-Borus, 2005; Rosengard, Anderson, & Stein, 2004). Although different patterns of disclosure rates suggest that PLWHA are more likely to disclose to confidants with whom they have close, intimate relationships, only two studies have directly assessed the association between perceived relationship intimacy or closeness and disclosure rates (Marks & Crepaz, 2001; Zea, Reisen, Poppen, Echeverry, & Bianchi, 2004). Results of these studies do suggest that PLWHA are more likely to disclose to sexual partners (Marks & Crepaz, 2001) and parents with whom they feel greater intimacy (Zea et al., 2004).

Synthesis

Our review suggests that PLWHA are more likely to disclose when they have strong goals for disclosure and when they are disclosing to confidants who are also HIV-positive or with whom they have important relationships. Though findings are less consistent, PLWHA may

also be more likely to disclose when they have come to accept their diagnosis and when health begins to decline. In contrast, PLWHA are less likely to disclose when they have strong goals against disclosure and perceive high levels of stigma.

What do these patterns of effects mean? We suggest that these individual antecedent measures may act as indicators of higher-order constructs representing approach vs. avoidance disclosure goals. As we alluded to earlier, the activation of approach vs. avoidance goal systems creates observable differences in a number of psychological measures such as attention, affect, and coping. For example, activation of the approach system is marked by greater attention to positive stimuli, positive affect, and approach-focused coping. Thus, each of these individual measures acts as an indicator of the higher-order (approach) goal construct.

In a similar fashion, although approach and avoidance goals have not been measured in the HIV disclosure literature *per se*, we suggest that the pattern of effects among these antecedent measures can be viewed as activation of approach or avoidance systems. In this way, goals for disclosure, confidants with the same serostatus, and important confidant relationships could represent activation of approach disclosure goals that increase disclosure likelihood. PLWHA are probably more likely to disclose to these types of confidants because they expect positive, supportive responses from them. Thus, these expectations might also correspond to approach disclosure goals such as the desire to gain support and enhance a personal relationship. Further, evidence relating measures of self-acceptance and biological markers of disease progression to greater disclosure likelihood might also indicate activation of approach disclosure goals. That is, as individuals come to accept their diagnosis and as HIV takes a toll on the physical body, disclosure goals might become more approach-focused. PLWHA may become more likely to want to disclose in order to seek social support and help educate their confidants. Thus, one reason why other measures of disease progression such as symptom staging and time since diagnosis have failed to be consistently related to disclosure likelihood is because they are less accurate measures of disclosure goals. In contrast, goals against disclosure and perceptions of stigma could represent activation of avoidance goals that decrease disclosure likelihood.

If, as we suggest, these individual patterns of results do represent activation of higher-order approach vs. avoidance goal constructs, the DPM can provide a parsimonious framework within which to integrate this diverse literature. In this way, the DPM framework can help to make sense of existing research and streamline future research by focusing attention on approach vs. avoidance disclosure goals rather than other individual factors that are not linked directly to a theoretical framework.

Disclosure event

Once people make the decision to disclose, what happens in their disclosure events? How do PLWHA communicate this sensitive information to their confidants, who is most likely to communicate effectively, and how does the disclosure event affect subsequent outcomes? Startlingly few studies have examined any aspect of the disclosure event.

Current evidence provides almost no information about the antecedent factors that affect what and how information is disclosed. Only two studies examined how antecedent factors are associated with disclosure event content. These studies demonstrated that parents tend to convey more detailed, severe information (i.e., greater breadth about the possibility of death) about their HIV-infection when they are in better health (i.e., higher CD4 count; Kirshenbaum & Nevid, 2002) and when their children are older in age (Kirshenbaum & Nevid, 2002; Rotheram-Borus, Draimin, Reid, & Murphy, 1997).

Evidence examining how the disclosure event affects long-term outcomes is slightly more abundant, and it provides converging evidence that positive confidant responses predict greater well-being. Several studies examined whether disclosure positivity—the degree to which disclosure events are perceived to be positive and supportive—is related to various indices of well-being. For example, in a longitudinal study of HIV-positive men, baseline disclosure positivity predicted lower depression and anxiety at a one-year follow-up (Hays et al., 1993). Additional cross-sectional studies demonstrated similar relationships between disclosure positivity and well-being, with disclosure positivity predicting greater quality of life (Chandra, Deepthivarma, & Manjula, 2003) and less likelihood of current cigarette smoking (Duval et al., 2008).

Among disclosures to sexual partners, the content of the disclosure event appears to be an important predictor of sexual risk outcomes. Crepaz and Marks (2003) examined the association between disclosure event content and sexual risk among HIV-positive men. Their results demonstrate that PLWHA whose disclosures also led to a discussion of safer sex practices during the disclosure event reported lower sexual risk with their confidants, but PLWHA who only disclosed their serostatus but did not also discuss safer sex reported no changes in sexual risk. This study underscores importance of research that examines the disclosure event itself—what PLWHA are saying and doing—in order to understand when disclosure will be beneficial.

In sum, very little research has focused on assessing relevant aspects of the disclosure event—what PLWHA talk about and how their confidants respond. Consistent with the DPM, disclosures that elicit positive confidant responses are most likely to be beneficial (Hays et al., 1993). However, additional research is needed in order to identify the characteristics of a disclosure event that make it effective or beneficial, and identify who is most likely to have disclosure events that exhibit these characteristics.

The DPM is well-suited to guide future research in this domain because it makes predictions about the characteristics that are likely to be associated with disclosure outcomes, and it makes predictions about *who* is most likely to have disclosure events containing these characteristics. The DPM predicts that individuals with approach disclosure goals are most likely to communicate in ways that contain optimal levels of depth, breadth, duration, and emotional content. These features of disclosures are, in turn, hypothesized to lead to optimal outcomes of disclosure.

Future research that tests these and other hypotheses of the DPM has the potential to enhance conceptual understandings of the disclosure process and provide evidence-based

recommendations to practitioners who assist PLWHA. For example, the DPM posits that individuals with approach disclosure goals may be uniquely suited to benefit from disclosure events compared to those with avoidance goals. Thus, screening tools that identify PLWHA with approach vs. avoidance disclosure goals may be one practical strategy for identifying individuals who may be least likely to benefit from disclosure. Instead, PLWHA with avoidance disclosure goals may benefit more from written and therapeutic disclosure than interpersonal disclosure. Further, intervention efforts that encourage PLHWA to set approach goals for disclosure or reframe avoidance goals may also help optimize the potential for disclosure to be beneficial.

Mediating processes and outcomes

What are the long-term outcomes of disclosure? The DPM suggests that disclosure can affect a wide array of outcomes and that these can be conceptualized to occur at individual, dyadic, and social contextual levels. That is, HIV disclosure can affect individual outcomes such as psychological distress, social support, and ARV adherence, dyadic outcomes between the discloser and confidant such as sexual risk, and social contextual outcomes such as cultural stigma and HIV testing behavior. Further, the DPM posits that disclosure can affect these outcomes via three mediating processes: alleviation of inhibition, social support, and changes in social information.

Individual level outcomes

Psychological well-being—According to the DPM, to the extent that disclosure allows PLWHA to express important thoughts and emotions or elicits a positive, supportive confidant response, it can be beneficial for psychological well-being (i.e., levels of depression, anxiety).

Within the HIV/AIDS disclosure literature, evidence for the association between disclosure and psychological well-being has been mixed. As we reviewed earlier, Hays et al. (1993) found that U.S. MSM who felt their confidants were helpful and supportive demonstrated lower depression and anxiety in both cross-sectional analysis and at a 1-year follow-up. However, a four-year study of African-American women living with HIV/AIDS in the U.S. found that high rates of disclosure led to greater psychological distress to the extent that it also increased perceptions of stigma (Clark et al., 2003). Thus, if women felt more stigmatized because of their disclosures, they also felt greater distress. A five year longitudinal study of parental disclosure to children in the U.S. found no association between baseline levels of distress and disclosure over time (Lee & Rotheram-Borus, 2002). Finally, cross-sectional studies also demonstrated mixed support for the association between disclosure and distress (e.g., Deribe et al., 2008; Fekete, Antoni, Durn, et al., 2009; Kalichman & Nachimson, 1999; Mello, Segurado, & Malbergier, 2010; Parsons et al., 2005; Petrak, Doyle, Smith, Skinner, & Hedge, 2001; Stein et al., 1998; Zea et al., 2005).

In sum, evidence for the relationship between disclosure and psychological distress is mixed. Failure to consider mediating processes of this association may be one factor contributing to this inconsistency. That is, disclosure alone does not appear to benefit psychological well-being. Instead, it is likely that disclosure is beneficial only to the extent

that it alleviates the psychological stress of inhibition or provides a mechanism to obtain social support (i.e., disclosure elicits mediating processes). Though the current HIV disclosure literature has examined social support as a mediator (Clark et al., 2003; Hays et al.,1993), no current work has examined the possibility that disclosure can alleviate the psychological stress of inhibition (for examples of related studies examining disclosure of sexual orientation, see Cole, Kemeny, Taylor, & Visscher, 1996; Ullrich, Lutgendorf, & Stapleton, 2003). Therefore, future research that examines both of these mediating processes will provide important new information.

Social support—Although very few studies have directly examined social support as a mediating process (for exceptions, see Kalichman et al., 2003; Waddell & Messeri, 2006; Zea et al., 2005), others have examined social support as a predictor an outcome. Several studies found that social support predicts greater disclosure. One U.S. study found that baseline social support predicted greater levels of disclosure at a 6-month follow-up (Perry, Card, Moffatt, Ashman, & Jacobsberg, 1994). Similarly, a study conducted in South Africa found that individuals who participated in a support group and PLWHA who used the services of a community health worker at baseline were more likely to have ever disclosed their HIV status at a 2-year follow-up compared to PLWHA who did not utilize these social support services (Wouters, Meulemans, & van Rensburg, 2009). In addition, there is evidence that social support may act as mediating (Kalichman et al., 2003) or moderating mechanism (Waddell & Messeri, 2006) whereby disclosure can benefit long-term outcomes. For example, in a study of the effect of disclosure and social support on ARV adherence, social support predicted greater adherence, but only among people who have disclosed (Waddell & Messeri, 2006). Finally, in line with conclusions from a recent meta-analysis (Smith et al., 2008), cross-sectional analyses provided mixed support for the association between disclosure and social support (e.g., Corona et al., 2006; Rice et al., 2009; Sachperoglou & Bor, 2001).

Taken together, evidence from longitudinal studies provides some converging support for the DPM. Though few studies directly examined social support as a mediating mechanism, existing evidence generally supports the premise that disclosure can be beneficial to the extent that it engenders social support from confidants (Waddell & Messeri, 2006). Further, evidence suggesting that social support can increase the likelihood of future serostatus disclosure (Wouters et al., 2009) provides some indirect support for the hypothesized feedback loop. That is, individuals who feel supported in their social network might be less likely to worry about the prospect of rejection (i.e., set few avoidance disclosure goals) and, instead, focus on the possibility for positive outcomes of disclosure (i.e., set many approach disclosure goals). Thus, this evidence might indirectly demonstrate that approach goals (via high levels of social support) led to greater disclosure likelihood.

ARV adherence—According to the DPM, disclosure can facilitate ARV adherence for two reasons. First, disclosure allows PLWHA to garner the social support needed to stick to difficult treatment regimens. Second, disclosure makes information about HIV status readily available to confidants, meaning that PLWHA no longer need to worry that taking

antiretroviral medications in public will "out" them in front of other people (Klitzman et al., 2004).

Evidence for the association between disclosure and ARV adherence is mixed. Among U.S. women living with HIV/AIDS, baseline level of disclosure to family was unrelated to ARV adherence at an 8-month follow-up assessment (Mellins, Kang, Leu, Havens, & Chesney, 2003; Mellins et al., 2002). However, as we noted above, disclosure to all friends and household members is indirectly related to greater ARV adherence (Waddell & Messeri, 2006). That is, this U.S. study finds that social support predicts ARV use, but only among PLWHA who had disclosed to all of their friends or all of their household members. Finally, the majority of cross-sectional studies found that disclosure was related to greater adherence in countries such as the U.S., Cambodia, and Tanzania (e.g., Ramadhani et al., 2007; Spire et al., 2008; Stirrat et al., 2006), although several found a null or inverse association between these constructs (Sherr et al., 2007, 2008).

Considered within the context of the Disclosure Processes Model, this literature provides partial support for the hypothesis that disclosure can promote ARV adherence via greater social support (Waddell & Messeri, 2006). However, this literature largely fails to examine the possibility that disclosure affects adherence because it changes social information. As the model suggests, disclosure might alleviate the fear that taking medications will inadvertently "out" PLWHA (Klitzman et al., 2004). Though most of the literature appears to support this possibility (e.g., Ramadhani et al., 2007; Spire et al., 2008; Stirrat et al., 2006), studies that find no association or find that disclosure is related to poorer adherence (Guimarães et al., 2008; Sherr et al., 2007, 2008) might suggest that disclosure can be detrimental in some contexts. That is, to the extent that disclosure increases the chance that PLWHA will experience stigmatization or will chronically worry about the potential for future stigmatization, disclosure could interfere with ARV adherence. Thus, future research that examines why disclosure is related to ARV adherence will provide critical new information to address these possibilities.

Physical well-being—According to the model, disclosure may also be beneficial for physical well-being if it alleviates the negative physical effects of inhibition (e.g., Pennebaker, 1997; Smyth, 1998). In a longitudinal study of U.S. men and women living with HIV/AIDS, consistent disclosure of HIV status and sexual orientation predicted increased CD4 count over time compared to consistent concealment of HIV status or sexual orientation (Strachan et al., 2007). Other research demonstrates that children who disclosed their HIV status to at least one friend demonstrated larger increases in immune functioning (i.e., CD4 cell counts) at a 1-year follow-up than children who had not disclosed (Sherman, Bonanno, Wiener, & Battles, 2000). While longitudinal studies found consistent patterns of results between disclosure and greater health, evidence from cross-sectional analyses provided mixed results (Fekete, Antoni, Lopez, et al., 2009; Lam, Naar-King, & Wright, 2007). In sum, consistent with the DPM, the majority of evidence suggests that disclosure can benefit physical well-being, presumably because it allows PLWHA to affectively and cognitively process information about their diagnosis.

Dyadic level outcomes

Sexual risk behavior—According to the DPM, disclosure can affect sexual risk behavior because it changes the information known by the discloser and confidant. Information about serostatus can affect perceptions of sexual risk and, in turn, affect sexual risk behavior. Given that Simoni and Pantalone (2005) provide a thorough review of the U.S.-based literature published through 2004, our review places particular emphasis on examining the U.S.-based literature published after 2004 and literature examining sexual risk among non-U.S. samples.

As Simoni and Pantalone's (2005) review suggests, there is not a consistent relationship between disclosure of HIV-positive serostatus and lowered sexual risk behavior. That is, while many studies demonstrate that disclosure to a sexual partner is related to safer sexual practices such as greater condom use (e.g., Bouhnik et al., 2007; Parsons et al., 2005), others find no relationship (Moskowitz & Roloff, 2008; Tunthanathip et al., 2009). Additional studies suggest that the relationship between disclosure and lower sexual risk behavior is moderated by factors such as partner type (i.e., casual vs. steady, HIV status of the confidant; Duru et al., 2006; Klitzman et al., 2007), participant gender (Lurie et al., 2008; Sullivan, 2009), or subsequent discussion of safer sex practices (Carballo-Diéguez, Miner, Dolezal, Rosser, & Jacoby, 2006; Horvath, Oakes, & Rosser, 2008).

In fact, in many studies, when MSM disclose their serostatus to a sexual partner who is also HIV-positive, disclosure can actually *increase* the likelihood of sexual risk behavior (Holt et al., 2009; Klitzman et al., 2007; Poppen, Reisen, Zea, Bianchi, & Echeverry, 2005; Semple et al., 2006). As the burgeoning literature on serosorting suggests (e.g., Eaton et al., 2007; Zablotska et al., 2009), disclosure to other seropositive confidants can actually reduce perceived risk of engaging in unprotected sexual acts among MSM. Thus, while the disclosure is often related to greater safer sex practices among heterosexual partners, it is frequently related to greater sexual risk among MSM.

In sum, our review echoes previous findings (Simoni & Pantalone, 2005) indicating that there is not a direct, consistent link between disclosure and lowered sexual risk behavior. What does appear to be clear, however, is that when information about HIV status is disclosed in the context of a sexual relationship, perceptions of risk do change (Suarez et al., 2001). In line with theorizing in the DPM, these perceptions can affect sexual risk behavior, but it appears that the way in which the behavior changes—becoming more or less risky—depends on other relevant factors such as the HIV status of the confidant.

Confidant well-being—The way in which disclosure changes the information available in dyadic and social contexts can also affect the well-being of the confidant. Confidants may feel greater distress by knowing that a loved one has HIV/AIDS or because they experience stigmatization due to their association with an individual living with HIV/AIDS (i.e., associative stigma; Goffman, 1963).

Longitudinal research in this domain focused solely on assessing children's well-being (Shaffer et al., 2001), and this research indicates that disclosing parental HIV-infection to children does not appear to significantly affect children's long-term well-being. For

example, children of mothers living with HIV/AIDS were interviewed pre- and post-disclosure and results suggested no difference in their functioning after disclosure (Shaffer et al., 2001). Cross-sectional studies found mixed results (for a review, see Murphy, 2008), although some suggest that the potential detrimental effects of disclosure to children are only evident when children are asked to keep this information a secret (Kirshenbaum & Nevid, 2002; Tompkins, 2007).

In sum, consistent with a previous review (Murphy, 2008), we found that there are few, if any, long-term negative effects of disclosure on children's well-being. However, what are the effects of disclosure on the well-being of other types of confidants? Existing research has not addressed this question.

Social contextual level outcomes

According to the DPM, individual disclosures can also affect the broader social context in which disclosers live. Each time PLWHA disclose their serostatus to a new confidant, their individual disclosure can help increase education about HIV, facilitate awareness and discussion of HIV, and can even promote HIV risk-reduction behaviors such as voluntary counseling and testing and safer sex practices.

Existing research has focused on understanding how one disclosure—Magic Johnson's public announcement of his HIV-infection—affected social contextual level outcomes. These studies demonstrate that Magic Johnson's disclosure increased awareness and knowledge of HIV (Ehde, Holm, & Robbins, 1995; Kalichman & Hunter, 1992), and decreased prejudice toward PLWHA (Penner & Fritzsche, 1993). Further, analyses of pre- and post-disclosure measures indicate that Magic Johnson's disclosure increased the likelihood that people talked to their friends about HIV (Kalichman & Hunter, 1992), increased rates of HIV testing (Cohn, Miller, Yamaguchi, & Douglas, 1992; Tesoriero, Sorin, Burrows, & LaChance-McCullough, 1995), and increased condom use (Moskowitz, Binson, & Catania, 1997).

Consistent with the DPM, disclosure has the potential to shape important social contextual outcomes. While not every person living with HIV/AIDS has the same degree of public reach as Magic Johnson, single disclosure events can help shape societal level beliefs and behaviors in ways that can aid in HIV prevention efforts. Studies that adopt a multi-level analysis in order to examine both individual and social contextual factors could help to provide a richer understanding of both the causes and consequences of disclosure.

Synthesis—Together, the literature demonstrates that disclosure can affect a wide array of individual, dyadic, and social contextual outcomes. Thus, while previous research has typically not integrated across these levels of analysis, the DPM encourages researchers to consider a wide array of important outcomes in order to fully understand how disclosure can affect the lives of PLWHA.

While the relationship between disclosure and long-term outcomes has been relatively consistent for some domains such as health outcomes and social contextual outcomes, the association has been quite heterogeneous for other domains such as ARV adherence and

sexual risk behavior. We suggest that one reason for this heterogeneity lies in the inconsistent assessment of potential mediating mechanisms. As our review has identified among several types of outcomes, mere disclosure of information about a discloser's HIV-positive serostatus is unlikely to directly affect long-term outcomes of interest. Instead, it is the mediating processes that happen as a result of the disclosure—less psychological and physical strain of suppression, greater social support, and changes in social information available—that appear to have the greatest effect on outcomes.

Greater attention to the mediating processes and outcomes of disclosure can also help identify new routes for intervention that may assist PLWHA with disclosure and optimize their well-being. For example, if researchers and practitioners fully understand *how* the alleviation of suppression through disclosure can benefit PLWHA, they can use this information to create evidence-based tools that could mimic the benefits of interpersonal disclosure without requiring actual disclosure. As we mentioned before, written disclosure has demonstrated similar therapeutic effects compared to interpersonal disclosure (Pennebaker, 1997). Further, individual- and group-based creative practices (e.g., singing, photography) could offer similar opportunities to express thoughts and feelings about living with HIV/AIDS without risking the potential for stigmatization. As these examples illustrate, understanding *how* disclosure affects long-term outcomes can help researchers and practitioners develop new strategies to help PLWHA cope with the ongoing challenges of HIV/AIDS.

The feedback loop: effects of disclosure on future disclosure events

Although rarely empirically studied, disclosure events may potentially impact how subsequent disclosure decisions and outcomes unfold. However, no known work has examined the possibility that discrete disclosure events may affect the likelihood of future disclosure among PLWHA. Thus, future work that adopts longitudinal approaches in order to study the effects of discrete disclosure events will be needed in order to fully understand these processes.

Discussion and recommendations

Disclosure is a critical component of prevention and treatment efforts designed to slow the transmission of HIV and optimize the health and well-being of those who live with HIV/AIDS. There has been no shortage of empirical research examining disclosure. What has been less plentiful, however, is theorizing regarding how PLWHA make decisions to disclose and how these decisions can, ultimately, affect their well-being. In order to address this gap, we have developed a theoretical framework—the Disclosure Processes Model (Chaudoir & Fisher, 2010)—designed to aid researchers who study disclosure.

Based on this framework, we reviewed evidence for the main factors in the disclosure process: antecedents, disclosure event, mediating processes and outcomes, and a feedback loop. We found that motivations for disclosure, confidant serostatus and relationship, and some measures of disease progression predict greater disclosure likelihood whereas motivations against disclosure, and stigma predict lower disclosure likelihood. We suggest that this pattern of effects is consistent with activation of approach vs. avoidance goals. Very

few studies have examined any aspect of the disclosure event, but this evidence does emphasize that aspects of the disclosure event can affect important outcomes such as psychological distress and sexual risk (Crepaz & Marks, 2003; Hays et al., 1993). There is also evidence suggesting that disclosure can affect a wide array of individual (e.g., psychological distress, ARV adherence), dyadic (e.g., sexual risk behavior), and social contextual (e.g., HIV awareness) outcomes. Although very few studies directly examine a specific mediating process leading to these outcomes, the pattern of effects in several domains (e.g., ARV adherence, psychological distress) supports an indirect, rather than direct, relationship between disclosure and beneficial outcomes. Finally, given the lack of research that adopts a longitudinal assessment and measures the effect of discrete disclosure events, no known research has examined the possibility that single disclosure events can affect subsequent disclosure processes through a feedback loop.

Overall, our review suggests that the DPM can provide a useful framework within which to interpret existing HIV/AIDS disclosure findings. In addition, the DPM can provide a framework to guide future research in this area. The DPM may be particularly useful because it integrates insights from a wide variety of domains (e.g., motivation, emotion, interpersonal communication) and from disclosure of a wide variety of concealable stigmatized identities (e.g., mental illness, sexual orientation). This broad approach may help identify useful theoretical (e.g., goal-pursuit, self-regulatory perspectives; Carver, 2006; Gable & Strachman, 2008) and methodological tools (e.g., daily diary study; Beals et al., 2009) that have not traditionally been utilized by HIV/AIDS disclosure researchers.

More importantly, the DPM draws attention to the interrelations among important aspects of the disclosure process—antecedents, disclosure event, and outcomes. The existing HIV/AIDS disclosure literature has largely focused on identifying predictors of disclosure likelihood and consequences of disclosure separately. No studies have attempted to bridge these literatures—to understand how the factors that bring PLWHA to disclose might, ultimately, affect their disclosure outcomes. We suggest that this is a major limitation of this literature, one that prevents researchers and practitioners from understanding *when* and *why* disclosure will be beneficial for PLWHA.

Another limitation is the cross-sectional and correlational design of most studies, which are limited in their ability to draw causal inferences. Longitudinal designs and measurement strategies (e.g., daily diary or event sampling methodologies; Tennen, Affleck, & Armeli, 2003) may overcome these problems. Another limitation is the conceptualization of disclosure as a trait- vs. event-based phenomenon. That is, findings from studies that assess the effect of a single event of disclosure (e.g., disclosure to recent sexual partner; Duru et al., 2006) and studies that assess the effect of overall, trait-like tendencies to disclose (e.g., Vanable et al., 2006) are often treated as measuring the same construct.

Our review does have several limitations. Most notably, our review findings are comprised primarily of evidence from U.S. samples, which limits its generalizability to other cultural contexts. In order to address this limitation, we have highlighted evidence from non-U.S. samples in our discussion.

The effect of confidant type is an additional factor that is beyond the scope of this review but which warrants much further consideration. As our review notes, extant literature examines disclosure to a vast array of types of confidants, including sexual partners (Kumarasamy et al., 2010), family and friends (Rice et al., 2009), medical providers (Jeffe et al., 2000), and children (Palin et al., 2009), and our review integrates findings across these confidants. Although we do focus on the effect of confidant relationship as an antecedent factor, there may be other ways in which disclosure to these confidants may differ. Our review does not directly attend to these aspects of disclosure to specific types of confidants; thus, future research and reviews could consider how disclosure processes may vary based on type of confidant.

Additionally, although the DPM offers a theoretical model that explains how antecedent goals, the disclosure event, and long-term outcomes are interrelated, it does not explicitly focus on other contextual factors that can impact the disclosure process. Particularly, the degree of social devaluation, or cultural stigma, associated with HIV across different social contexts (Mishra, Medley, Hong, Gu, & Robey, 2009) may reduce the likelihood that disclosure will be beneficial. Considered within the DPM, PLWHA who live in contexts where there is greater cultural stigma associated with HIV may be more likely to adopt avoidance disclosure goals, thereby lowering their chances of having positive confidant responses. However, strong cultural stigma may also lower the likelihood that disclosure will be beneficial regardless of disclosers' individual goals. That is, disclosure may simply be riskier in some social contexts, where discloser attributes (e.g., gender and sexual orientation), confidant attributes (e.g., HIV knowledge), and societal policies (e.g., disclosure laws; Galletly & Pinkerton, 2006) can each serve to increase HIV stigma and, thereby, affect disclosure outcomes. Additional research is needed to understand how these contextual factors affect the disclosure process.

Conclusion

In every corner of the world, PLWHA continually face difficult decisions regarding when to disclose and how to cope with the outcomes of these decisions. Despite its importance for individual well-being and public health, answers to questions such as "When is it better to disclose HIV status than to keep it concealed?" and "What are the likely consequences of disclosing?" have not been readily apparent in the empirical literature. As our review notes, considerable research must be done in order to understand the answer to these questions and use this information to develop strategies to effectively help PLWHA with these ongoing challenges. The DPM (Chaudoir & Fisher, 2010) was designed with these questions in mind, and we believe that its application to research and practical settings will help provide new answers to these difficult questions.

References[1]

*. Akani CI, Erhabor O. Rate, pattern and barriers of HIV serostatus disclosure in a resource-limited setting in the Niger delta of Nigeria. Tropical Doctor. 2006; 36:87–89. [PubMed: 16611440]

[1]* Article included in review.

Altman, I.; Taylor, DA. Social penetration: The development of interpersonal relationships. New York, NY: Holt, Rinehart & Winston; 1973.

*. Arnold EM, Rice E, Flannery D, Rotheram-Borus M. HIV disclosure among adults living with HIV. AIDS Care. 2008; 20:80–92.10.1080/09540120701449138 [PubMed: 18278618]

*. Bachmann LH, Grimley DM, Chen H, Aban I, Hu J, Zhang S, et al. Risk behaviours in HIV-positive men who have sex with men participating in an intervention in a primary care setting. International Journal of STD and AIDS. 2009; 20:607–612. [PubMed: 19710332]

Bairan A, Taylor GAJ, Blake BJ, Akers T, Sowell R, Mendiola RJ. A model of HIV disclosure: disclosure and types of social relationships. Journal of the American Academy of Nurse Practitioners. 2007; 19:242–250.10.1111/j.1745-7599.2007.00221.x [PubMed: 17489957]

*. Batterham P, Rice E, Rotheram-Borus M. Predictors of serostatus disclosure to partners among young people living with HIV in the pre- and post-HAART eras. AIDS and Behavior. 2005; 9:281–287.10.1007/s10461-005-9002-5 [PubMed: 16088367]

Beals KP, Peplau LA, Gable SL. Stigma management and well-being: the role of perceived social support, emotional processing, and suppression. Personality and Social Psychology Bulletin. 2009; 35:867–879. [PubMed: 19403792]

Bird JDP, Voisin D. A conceptual model of HIV-disclosure in casual sexual encounters among men who have sex with men. Journal of Health Psychology. 2010

*. Bouhnik AD, Prećau M, Schiltz MA, Lert F, Obadia Y, Spire B. Unprotected sex in regular partnerships among homosexual men living with HIV: a comparison between sero-nonconcordant and seroconcordant couples (ANRS-EN12-VESPA study). AIDS. 2007; 21:S43–S48. [PubMed: 17159586]

*. Carballo-Diéguez A, Miner M, Dolezal C, Rosser BRS, Jacoby S. Sexual negotiation, HIV-status disclosure, and sexual risk behavior among Latino men who use the internet to seek sex with other men. Archives of Sexual Behavior. 2006; 35:473–481.10.1007/s10508-006-9078-7 [PubMed: 16933107]

Carver CS. Approach, avoidance, and the self-regulation of affect and action. Motivation and Emotion. 2006; 30:105–110.10.1007/s11031-006-9044-7

*. Chandra PS, Deepthivarma S, Manjula V. Disclosure of HIV infection in south India: patterns, reasons and reactions. AIDS Care. 2003; 15:207–215. [PubMed: 12856342]

Chaudoir, SR. Unpublished doctoral dissertation. University of Connecticut; Storrs: 2009. HIV/AIDS disclosure decision making and outcomes: a longitudinal, event-based analysis.

Chaudoir SR, Fisher JD. The disclosure processes model: understanding disclosure decision making and post disclosure outcomes among people living with a concealable stigmatized identity. Psychological Bulletin. 2010; 136:236–256.10.1037/a0018193 [PubMed: 20192562]

Chaudoir SR, Quinn DM. Revealing concealable stigmatized identities: the impact of disclosure motivations and positive first-disclosure experiences on fear of disclosure and well-being. Journal of Social Issues. 2010; 66:570–584.10.1111/j.1540-4560.2010.01663.x

*. Clark HJ, Lindner G, Armistead L, Austin B. Stigma, disclosure, and psychological functioning among HIV-infected and non-infected African-American women. Women & Health. 2003; 38:57–71.10.1300/J013v38n04_04 [PubMed: 14750776]

*. Cohn DL, Miller LA, Yamaguchi KJ, Douglas JM. Denver's increase in HIV counseling after Magic Johnson's HIV disclosure. American Journal of Public Health. 1992; 82:1692.10.2105/AJPH.82.12.1692 [PubMed: 1456353]

Cole SW, Kemeny ME, Taylor SE, Visscher BR. Elevated physical health risk among gay men who conceal their homosexual identity. Health Psychology. 1996; 15:243–251. [PubMed: 8818670]

*. Corona R, Beckett M, Cowgill B, Elliott M, Murphy D, Zhou A, et al. Do children know their parent's HIV status? Parental reports of child awareness in a nationally representative sample. Ambulatory Pediatrics. 2006; 6:138–144. [PubMed: 16713931]

*. Crepaz N, Marks G. Serostatus disclosure, sexual communication and safer sex in HIV-positive men. AIDS Care. 2003; 15:379–387. [PubMed: 12745398]

*. Deribe K, Woldemichael K, Wondafrash M, Haile A, Amberbir A. Disclosure experience and associated factors among HIV positive men and women clinical service users in southwest Ethiopia. BMC Public Health. 2008; 8:81–90. [PubMed: 18312653]

*. Derlega, VJ.; Winstead, BA. HIV-infected persons' attributions for the disclosure and nondisclosure of the seropositive diagnosis to significant others. In: Manusov, V.; Harvey, JH.; Manusov, V.; Harvey, JH., editors. Attribution, communication behavior, and close relationships. New York, NY US: Cambridge University Press; 2001. p. 266-284.

*. Derlega, VJ.; Winstead, BA.; Folk-Barron, L. Reasons for and against disclosing HIV-seropositive test results to an intimate partner: a functional perspective. In: Petronio, S.; Petronio, S., editors. Balancing the secrets of private disclosures. Mahwah, NJ: Lawrence Erlbaum Associates Publishers; 2000. p. 53-69.

*. Derlega VJ, Winstead BA, Greene K, Serovich J, Elwood WN. Perceived HIV-related stigma and HIV disclosure to relationship partners after finding out about the seropositive diagnosis. Journal of Health Psychology. 2002; 7:415–432. [PubMed: 22112752]

*. Derlega VJ, Winstead BA, Greene K, Serovich J, Elwood WN. Reasons for HIV disclosure/nondisclosure in close relationships: testing a model of HIV-disclosure decision making. Journal of Social and Clinical Psychology. 2004; 23:747–767.

*. Duru OK, Collins RL, Ciccarone DH, Morton SC, Stall R, Beckman R, et al. Correlates of sex without serostatus disclosure among a national probability sample of HIV patients. AIDS and Behavior. 2006; 10:495–507. [PubMed: 16779659]

*. Duval X, Baron G, Garelik D, Villes V, Dupr T, Leport C, et al. Living with HIV, antiretroviral treatment experience and tobacco smoking: results from a multisite cross-sectional study. Antiviral Therapy. 2008; 13:389–397. [PubMed: 18572752]

Eaton LA, Kalichman SC, Cain DN, Cherry C, Stearns HL, Amaral CM, et al. Serosorting sexual partners and risk for HIV among men who have sex with men. American Journal of Preventive Medicine. 2007; 33:479. [PubMed: 18022064]

*. Ehde DM, Holm JE, Robbins GM. The impact of Magic Johnson's HIV serostatus disclosure on unmarried college students' HIV knowledge, attitudes, risk perception, and sexual behavior. Journal of American College Health. 1995; 44:55–58. [PubMed: 7593993]

Elliot, AJ. Approach and avoidance motivation. In: Elliot, AJ., editor. Handbook of approach and avoidance motivation. New York: Psychology Press; 2008. p. 3-14.

*. Fekete E, Antoni M, Durn R, Stoelb B, Kumar M, Schneiderman N. Disclosing HIV serostatus to family members: effects on psychological and physiological health in minority women living with HIV. International Journal of Behavioral Medicine. 2009; 16:367–376. [PubMed: 19306063]

*. Fekete EM, Antoni MH, Lopez CR, Durán RE, Penedo FJ, Bandiera FC, et al. Men's serostatus disclosure to parents: associations among social support, ethnicity, and disease status in men living with HIV. Brain, Behavior, and Immunity. 2009; 23:693–699.10.1016/j.bbi.2009.01.007

Gable, SL.; Strachman, A. Approaching social rewards and avoiding social punishments: appetitive and aversive social motivation. In: Shah, JY.; Gardner, WL., editors. Handbook of motivation science. New York, NY: Guilford Press; 2008. p. 561-575.

Galletly CL, Pinkerton SD. Conflicting messages: how criminal HIV disclosure laws undermine public health efforts to control the spread of HIV. AIDS and Behavior. 2006; 10:451–461.10.1007/s10461-006-9117-3 [PubMed: 16804750]

Garcia JA, Crocker J. Reasons for disclosing depression matter: the consequences of having egosystem and ecosystem goals. Social Science & Medicine. 2008; 67:453–462. [PubMed: 18450349]

Goffman, E. Stigma: Notes on the management of spoiled identity. New York, NY: Simon & Schuster; 1963.

Gray, JA. The psychology of fear and stress. 2. New York: Cambridge University Press; 1987.

Greene, K.; Derlega, VJ.; Mathews, A. Self-disclosure in personal relationships. In: Vangelisti, AL.; Perlman, D.; Vangelisti, AL.; Perlman, D., editors. The Cambridge handbook of personal relationships. New York, NY: Cambridge University Press; 2006. p. 409-427.

*. Guimarães MDC, Rocha G, Campos L, de Freitas FMT, Gualberto FAS, Teixeira RA, et al. Difficulties reported by HIV-infected patients using antiretroviral therapy in Brazil. Clinics. 2008; 63:165–172. [PubMed: 18438569]

*. Hays RB, McKusick L, Pollack L, Hilliard R. Disclosing HIV seropositivity to significant others. AIDS. 1993; 7:425–431. [PubMed: 8471207]

Higgins, ET. Promotion and prevention: regulatory focus as a motivational principle. In: Zanna, MP., editor. Advances in experimental social psychology. San Diego, CA: Academic Press; 1998. p. 1-46.

*. Holt M, Rawstorne P, Worth H, Bittman M, Wilkinson J, Kippax S. Predictors of HIV disclosure among untested, HIV-negative and HIV-positive Australian men who had anal intercourse with their most recent casual male sex partner. AIDS and Behavior. 2009

*. Horvath K, Oakes JM, Rosser BRS. Sexual negotiation and HIV serodisclosure among men who have sex with men with their online and offline partners. Journal of Urban Health. 2008; 85:744–758. [PubMed: 18649141]

*. Jeffe DB, Khan SR, Meredith KL, Schlesinger M, Fraser VJ, Mundy LM. Disclosure of HIV status to medical providers: differences by gender, “race,” and immune function. Public Health Reports Hyattsville. 2000; 115:38–45.

*. Kalichman SC, DiMarco M, Austin J, Luke W, Difonzo K. Stress, social support, and HIV-status disclosure to family and friends among HIV-positive men and women. Journal of Behavioral Medicine. 2003; 26:315–331. [PubMed: 12921006]

*. Kalichman SC, Hunter TL. The disclosure of celebrity HIV infection: its effects on public attitudes. American Journal of Public Health. 1992; 82:1374–1376. [PubMed: 1415863]

*. Kalichman SC, Nachimson D. Self-efficacy and disclosure of HIV-positive serostatus to sex partners. Health Psychology. 1999; 18:281–287. [PubMed: 10357509]

*. King R, Katuntu D, Lifshay J, Packel L, Batamwita R, Nakayiwa S, et al. Processes and outcomes of HIV serostatus disclosure to sexual partners among people living with HIV in Uganda. AIDS and Behavior. 2008; 12:232–243.10.1007/s10461-007-9307-7 [PubMed: 17828450]

*. Kirshenbaum SB, Nevid JS. The specificity of maternal disclosure of HIV/AIDS in relation to children’s adjustment. AIDS Education and Prevention. 2002; 14:1–16. [PubMed: 11900106]

*. Klitzman R, Exner T, Correale J, Kirshenbaum SB, Remien R, Ehrhardt AA, et al. It’s not just what you say: relationship of HIV disclosure and risk reduction among MSM in the post-HAART era. AIDS Care. 2007; 19:749–756.10.1080/09540120600983971 [PubMed: 17573594]

Klitzman RL, Kirshenbaum SB, Dodge B, Remien RH, Ehrhard AA, Johnson MO, et al. Intricacies and inter-relationships between HIV disclosure and HAART: a qualitative study. AIDS Care. 2004; 16:628–640. [PubMed: 15223532]

*. Kumarasamy N, Venkatesh KK, Srikrishnan AK, Prasad L, Balakrishnan P, Thamburaj E, et al. Risk factors for HIV transmission among heterosexual discordant couples in south India. HIV Medicine. 2010; 11:178–186. [PubMed: 19780862]

*. Lam PK, Naar-King S, Wright K. Social support and disclosure as predictors of mental health in HIV-positive youth. AIDS Patient Care and STDs. 2007; 21:20–29. [PubMed: 17263655]

*. Landau G, York AS. Keeping and disclosing a secret among people with HIV in Israel. Health & Social Work. 2004; 29:116–126. [PubMed: 15156844]

*. Lee MB, Rotheram-Borus M. Parents’ disclosure of HIV to their children. AIDS. 2002; 16:2201–2207. [PubMed: 12409742]

*. Li X, Wang H, Williams A, He G. Stigma reported by people living with HIV in south central China. The Journal of the Association of Nurses in AIDS Care. 2009; 20:22–30. [PubMed: 19118768]

*. Loubiere S, Peretti-Watel P, Boyer S, Blanche J, Abega S, Spire B. HIV disclosure and unsafe sex among HIV-infected women in Cameroon: results from the ANRS-EVAL study. Social Science & Medicine. 2009; 69:885–891. [PubMed: 19560244]

*. Lurie M, Pronyk P, de Moor E, Heyer A, de Bruyn G, Struthers H, et al. Sexual behavior and reproductive health among HIV-infected patients in urban and rural South Africa. Journal of Acquired Immune Deficiency Syndromes. 2008; 47:484–493. [PubMed: 18209685]

*. Marks G, Crepaz N. HIV-positive men’s sexual practices in the context of self-disclosure of HIV status. Journal of Acquired Immune Deficiency Syndromes. 2001; 27:79–85. [PubMed: 11404524]

*. Makin J, Forsyth BWC, Visser M, Sikkema K, Neufeld S, Jeffery B. Factors affecting disclosure in South African HIV-positive pregnant women. AIDS Patient Care and STDs. 2008; 22:907–916. [PubMed: 19025485]

*. Mellins C, Kang E, Leu C, Havens J, Chesney M. Longitudinal study of mental health and psychosocial predictors of medical treatment adherence in mothers living with HIV disease. AIDS Patient Care and STDs. 2003; 17:407–416. [PubMed: 13678542]

*. Mellins CA, Havens JF, McCaskill EO, Leu CS, Brudney K, Chesney MA. Mental health, substance use and disclosure are significantly associated with the medical treatment adherence of HIV-infected mothers. Psychology, Health & Medicine. 2002; 7:451–460.10.1080/1354850021000015267

*. Mello VA, Segurado AA, Malbergier A. Depression in women living with HIV: clinical and psychosocial correlates. Archive of Women's Mental Health. 2010; 13:193–199.

Mishra, V.; Medley, A.; Hong, R.; Gu, Y.; Robey, B. DHS comparative reports No. 22. Calverton, MD: Macro International, Inc; 2009. Levels and spread of HIV seroprevalence and associated factors: Evidence from national household surveys.

*. Moskowitz DA, Roloff ME. Vengeance, HIV disclosure, and perceived HIV transmission to others. AIDS and Behavior. 2008; 12:721–728.10.1007/s10461-008-9410-4 [PubMed: 18512142]

*. Moskowitz JT, Binson D, Catania JA. The association between Magic Johnson's HIV serostatus disclosure and condom use in at-risk respondents. Journal of Sex Research. 1997; 34:154–160.

Murphy DA. HIV-positive mothers' disclosure of their serostatus to their young children: a review. Clinical Child Psychology and Psychiatry. 2008; 13:105–122.10.1177/1359104507087464 [PubMed: 18411869]

*. Niccolai LM, King E, D'Entremont D, Pritchett EN. Disclosure of HIV serostatus to sex partners: a new approach to measurement. Sexually Transmitted Diseases. 2006; 33:102. [PubMed: 16432481]

*. O'Brien M, Richardson-Alston G, Ayoub M, Magnus M, Peterman T, Kissinger P. Prevalence and correlates of HIV serostatus disclosure. Sexually Transmitted Diseases. 2003; 30:731–735. [PubMed: 12972799]

Ogden, J.; Nyblade, L. Common at its core: HIV-related stigma across contexts. Washington, DC: International Center for Research on Women; 2005.

*. Palin F, Armistead L, Clayton A, Ketchen B, Lindner G, Kokot-Louw P, et al. Disclosure of maternal HIV-infection in South Africa: description and relationship to child functioning. AIDS and Behavior. 2009; 13:1241–1252. [PubMed: 18770026]

*. Parsons JT, Schrimshaw EW, Bimbi DS, Wolitski RJ, Gómez CA, Halkitis PN. Consistent, inconsistent, and non-disclosure to casual sexual partners among HIV-seropositive gay and bisexual men. AIDS. 2005; 19:S87–SS97. [PubMed: 15838198]

Pennebaker JW. Writing about emotional experiences as a therapeutic process. Psychological Science. 1997; 8:162–166.

*. Penner LA, Fritzsche BA. Magic Johnson and reactions to people with AIDS: a natural experiment. Journal of Applied Social Psychology. 1993; 23:1035–1050.10.1111/j.1559-1816.1993.tb01020.x

*. Peretti-Watel P, Spire B, Pierret J, Lert F, Obadia Y. Management of HIV-related stigma and adherence to HAART: evidence from a large representative sample of outpatients attending French hospitals (ANRS-EN12-VESPA 2003). AIDS Care. 2006; 18:254–261. [PubMed: 16546787]

*. Perry SW, Card AL, Moffatt M Jr, Ashman T, Jacobsberg LB. Self-disclosure of HIV infection to sexual partners after repeated counseling. AIDS Education and Prevention. 1994; 6:403–411. [PubMed: 7818976]

*. Petrak JA, Doyle A, Smith A, Skinner C, Hedge B. Factors associated with self-disclosure of HIV serostatus to significant others. British Journal of Health Psychology. 2001; 6:69–79. [PubMed: 14596739]

Petronio, S. Boundaries of privacy: Dialectics of disclosure. Albany, NY: State University of New York Press; 2002.

*. Poppen PJ, Reisen CA, Zea MC, Bianchi FT, Echeverry JJ. Serostatus disclosure, seroconcordance, partner relationship, and unprotected anal intercourse among HIV-positive Latino men who have sex with men. AIDS Education and Prevention. 2005; 17:227–237. [PubMed: 16006209]

*. Ramadhani H, Thielman N, Landman K, Ndosi E, Gao F, Kirchherr J, et al. Predictors of incomplete adherence, virologic failure, and antiviral drug resistance among HIV-infected adults receiving antiretroviral therapy in Tanzania. Clinical Infectious Diseases. 2007; 45:1492–1498. [PubMed: 17990233]

Reis, HT.; Shaver, P. Intimacy as an interpersonal process. In: Duck, S., editor. Handbook of personal relationships: Theory, research and interventions. Oxford, England: John Wiley & Sons; 1988. p. 367-389.

*. Rice E, Comulada S, Green S, Arnold EM, Rotheram-Borus M. Differential disclosure across social network ties among women living with HIV. AIDS and Behavior. 2009; 13:1253–1261.10.1007/s10461-009-9554-x [PubMed: 19357944]

*. Rosengard C, Anderson B, Stein M. Intravenous drug users' HIV-risk behaviors with primary/other partners. The American Journal of Drug and Alcohol Abuse. 2004; 30:225–236. [PubMed: 15230073]

*. Rosser BRS, Horvath KJ, Hatfield LA, Peterson JL, Jacoby S, Stately A. Predictors of HIV disclosure to secondary partners and sexual risk behavior among a high-risk sample of HIV-positive MSM: results from six epicenters in the US. AIDS Care. 2008; 20:925–930.10.1080/09540120701767265 [PubMed: 18777221]

*. Rotheram-Borus MJ, Draimin BH, Reid HM, Murphy DM. The impact of illness disclosure and custody plans on adolescents whose parents live with AIDS. AIDS. 1997; 11:1159–1164. [PubMed: 9233464]

*. Sachperoglou E, Bor R. Disclosure of HIV seropositivity and social support: general patterns in Greece. European Journal of Psychotherapy, Counseling and Health. 2001; 4:103–122.10.1080/13642530110041054

*. Semple SJ, Zians J, Grant I, Patterson TL. Sexual risk behavior of HIV-positive methamphetamine-using men who have sex with men: the role of partner serostatus and partner type. Archives of Sexual Behavior. 2006; 35:461–471.10.1007/s10508-006-9045-3 [PubMed: 16909320]

*. Serovich JM. A test of two HIV disclosure theories. AIDS Education and Prevention. 2001; 13:355–364. [PubMed: 11565594]

*. Serovich JM, Lim J, Mason TL. A retest of two HIV disclosure theories: the women's story. Health & Social Work. 2008; 33:23–31. [PubMed: 18326447]

*. Serovich JM, Mosack KE. Reasons for HIV disclosure or nondisclosure to casual sexual partners. AIDS Education and Prevention. 2003; 15:70–80. [PubMed: 12627744]

*. Shaffer A, Jones DJ, Kotchick BA, Forehand R, Armistead L, Morse E, et al. Telling the children: disclosure of maternal HIV infection and its effects on child psychosocial adjustment. Journal of Child and Family Studies. 2001; 10:301–313.10.1023/A:1012502527457

*. Sherman BF, Bonanno GA, Wiener LS, Battles HB. When children tell their friends they have AIDS: possible consequences for psychological well-being and disease progression. Psychosomatic Medicine. 2000; 62:238–247. [PubMed: 10772404]

*. Sherr L, Lampe F, Norwood S, Date H, Harding R, Johnson M, et al. Adherence to antiretroviral treatment in patients with HIV in the UK: a study of complexity. AIDS Care. 2008; 20:442–448. [PubMed: 18449821]

*. Sherr L, Lampe F, Norwood S, Leake-Date H, Fisher M, Edwards S, et al. Successive switching of antiretroviral therapy is associated with high psychological and physical burden. International Journal of STD and AIDS. 2007; 18:700–704.10.1258/095646207782193821 [PubMed: 17945049]

Simoni, JM.; Pantalone, DW. HIV disclosure and safer sex. In: Kalichman, SC., editor. Positive prevention: Sourcebook for HIV prevention with people living with HIV/AIDS. New York, NY: Kluwer; 2005. p. 65-98.

Smith R, Rossetto K, Peterson BL. A meta-analysis of disclosure of one's HIV-positive status, stigma and social support. AIDS Care. 2008; 20:1266. [PubMed: 18608080]

Smyth JM. Written emotional expression: effect sizes, outcome types, and moderating variables. Journal of Consulting and Clinical Psychology. 1998; 66:174–184.10.1037/0022-006X.66.1.174 [PubMed: 9489272]

*. Spire B, Carrieri P, Sopha P, Protopopescu C, Prak N, Quillet C, et al. Adherence to antiretroviral therapy in patients enrolled in a comprehensive care program in Cambodia: a 24-month follow-up assessment. Antiviral Therapy. 2008; 13:697–703. [PubMed: 18771053]

*. Stein MD, Freedberg KA, Sullivan LM, Savetsky J, Levenson SM, Hingson R, et al. Sexual ethics: disclosure of HIV-positive status to partners. Archives of Internal Medicine. 1998; 158:253. [PubMed: 9472205]

*. Stirrat MJ, Remien RH, Smith A, Copeland OQ, Dolezal C, Krieger D. The role of HIV serostatus disclosure in antiretroviral medication adherence. AIDS and Behavior. 2006; 10:483–493. [PubMed: 16721505]

*. Strachan ED, Bennett WRM, Russo J, Roy-Byrne P. Disclosure of HIV status and sexual orientation independently predicts increased absolute CD4 cell counts over time for psychiatric patients. Psychosomatic Medicine. 2007; 69:74–80.10.1097/01.psy.0000249900.34885.46 [PubMed: 17167125]

*. Suarez TP, Kelly JA, Pinkerton SD, Stevenson YL, Hayat M, Smith MD, et al. Influence of a partner's HIV serostatus, use of highly active anti-retroviral therapy, and viral load on perceptions of sexual risk behavior in a community sample of men who have sex with men. Journal of Acquired Immune Deficiency Syndromes. 2001; 28:471–477. [PubMed: 11744837]

*. Sullivan K. Disclosure of serostatus to sex partners among HIV-positive men and women in Hawaii. Issues in Mental Health Nursing. 2009; 30:687–701. [PubMed: 19874097]

Tennen, H.; Affleck, G.; Armeli, S. Daily processes in health and illness. In: Suls, J.; Wallston, KA.; Suls, J.; Wallston, KA., editors. Social psychological foundations of health and illness. Malden, MA: Blackwell Publishing; 2003. p. 495-529.

*. Tesoriero JM, Sorin MD, Burrows KA, LaChance-McCullough M. Harnessing the heightened public awareness of celebrity HIV disclosures: 'Magic' and 'Cooki' Johnson and HIV testing. AIDS Education and Prevention. 1995; 7:232–250. [PubMed: 7646947]

*. Tompkins TL. Disclosure of maternal HIV status to children: to tell or not to tell that is the question. Journal of Child and Family Studies. 2007; 16:773–788.10.1007/s10826-006-9124-z

*. Tunthanathip P, Lolekha R, Bollen LJM, Chaovavanich A, Siangphoe U, Nandavisai C, et al. Indicators for sexual HIV transmission risk among people in Thailand attending HIV care: the importance of positive prevention. Sexually Transmitted Infections. 2009; 85:36–41. [PubMed: 18927180]

Ullrich PM, Lutgendorf SK, Stapleton JT. Concealment of homosexual identity, socialsupport and CD4 cell count among HIV-seropositive gay men. Journal of Psychosomatic Research. 2003; 54:205–212.10.1016/S0022-3999(02)00481-6 [PubMed: 12614830]

*. Vanable PA, Carey MP, Blair DC, Littlewood RA. Impact of HIV-related stigma on health behaviors and psychological adjustment among HIV-positive men and women. AIDS and Behavior. 2006; 10:473–482.10.1007/s10461-006-9099-1 [PubMed: 16604295]

*. Waddell EN, Messeri PA. Social support, disclosure, and use of antiretroviral therapy. AIDS and Behavior. 2006; 10:263–272. [PubMed: 16496089]

*. Wong LH, Van Rooyen H, Modiba P, Richter L, Gray G, Mclntyre JA, et al. Test and tell: correlates and consequences of testing and disclosure of HIV status in South Africa (HPTN 043 project accept). JAIDS Journal of Acquired Immune Deficiency Syndromes. 2009; 50:215–222.10.1097/QAI.0b013e3181900172

*. Wouters E, Meulemans H, van Rensburg HCJ. Slow to share: social capital and its role in public HIV disclosure among public sector ART patients in the Free State province of South Africa. AIDS Care. 2009; 21:411–421.10.1080/09540120802242077 [PubMed: 19266407]

Zablotska IB, Imrie J, Prestage G, Crawford J, Rawstorne P, Grulich A, et al. Gay men's current practice of HIV seroconcordant unprotected anal intercourse: serosorting or seroguessing? AIDS Care. 2009; 21:501–510.10.1080/09540120802270292 [PubMed: 19266409]

*. Zea MC, Reisen CA, Poppen PJ, Bianchi FT, Echeverry JJ. Predictors of disclosure of human immunovirus-positive serostatus among Latino gay men. Cultural Diversity and Ethnic Minority Psychology. 2007; 13:304–312.10.1037/1099-9809.13.4.304 [PubMed: 17967098]

*. Zea MC, Reisen CA, Poppen PJ, Bianchi FT, Echeverry JJ. Disclosure of HIV status and psychological well-being among Latino gay and bisexual men. AIDS and Behavior. 2005; 9:15–26.10.1007/s10461-005-1678-z [PubMed: 15812610]

*. Zea MC, Reisen CA, Poppen PJ, Echeverry JJ, Bianchi FT. Disclosure of HIV-positive status to Latino gay men's social networks. American Journal of Community Psychology. 2004; 33:107. [PubMed: 15055758]

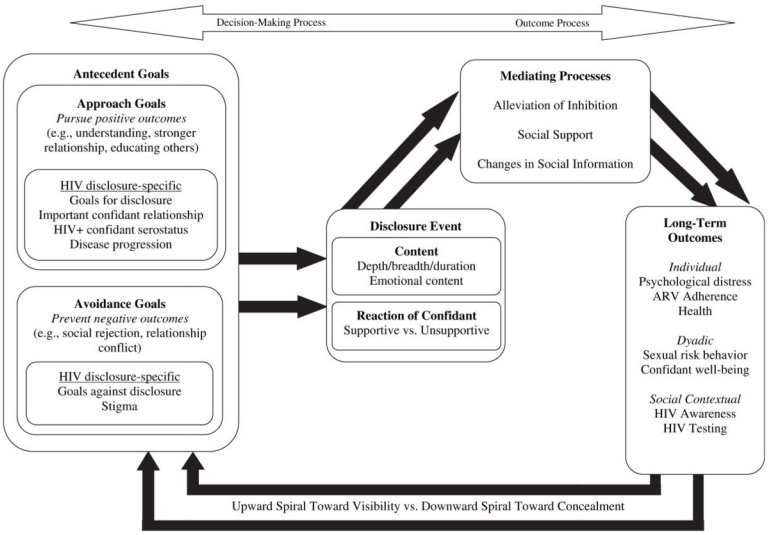

Fig. 1.

Disclosure Processes Model adapted for HIV disclosure. Adapted with permission: Chaudoir and Fisher (2010).

Fig. 2.
Systematic review process.

Table 1

Study characteristics (N = 210).

Characteristics	*N*
Country of origin	
United States	141
SA	13
UK	9
France	6
Thailand	5
Tanzania	3
Uganda	3
Australia	2
Brazil	2
China	2
India	2
Nigeria	2
Zambia	2
Barbados, Botswana, Cambodia, Cameroon, Canada, Cote D'Ivoire, Ethiopia, French Antilles/French Guiana, Germany, Israel, Kenya, Mozambique, Namibia, Rwanda, Sweden, Taiwan, Multiple African Countries, Multiple European Countries	1 each
Study design	
Cross-sectional	176
Longitudinal	34
Components of the DPM measured	
Antecedents	144
Disclosure event	15
Outcomes	118
Type of discloser	
Adult men and women	73
MSM	32
Parents	26
Women	24
Children or adolescents	14
Men	14
Pregnant women	11
Magic Johnson	9
Substance abuse/IDU	4
Homeless/unstably housed	2
Serodiscordant couples	1
Type of confidant	
Multiple types (e.g., friends, family, partners)	99
Sexual partner	65
Children	22
Public	10

Characteristics	***N***
Medical provider	6
Family	3
Friends	3
Co-workers	2

Notes. MSM = men who have sex with men; IDU = intravenous drug users.

Table 2

Number of articles assessing associations between DPM constructs.

Association between DPM constructs	Total articles measuring association	Longitudinal articles	Cross-sectional articles
Antecedents → Disclosure Likelihood			
Goals	7	0	7
Stigma	18	2	16
Disease progression	42	3	39
Confidant relationship	24	0	24
Confidant serostatus	15	0	15
Antecedents → disclosure event	3	1	2
Disclosure event → outcomes	10	4	6
Disclosure likelihood → outcomes			
Individual			
Psychological well-being	29	3	26
Social support	21	3	18
ARV adherence	15	2	13
Physical well-being	5	2	3
Dyadic			
Sexual risk behavior	39	3	36
Confidant well-being	13	2	11
Social contextual	9	7	2
Feedback loop	0	0	n/a

Note. DPM = Disclosure Processes Model.